

1.1 BACKGROUND AND SCOPE

Contractor shall furnish all labor, equipment, materials, and supervision to load, transport, unload, and beneficially reuse or dispose of stabilized dewatered wastewater biosolids (the Work) obtained from the City of Sunnyvale Water Pollution Control Plant (the City), located at 1444 Borregas Ave, Sunnyvale, California. A location map for the site is presented in Attachment F. The work shall be carried out in accordance with these specifications. The biosolids are to be beneficially reused (or properly disposed) at a site to be specified by the Contractor. The estimated maximum annual quantity of biosolids to be removed is 2000 tons (wet weight), at a minimum of 14% total solids. However, the actual amount of biosolids produced may be less.

The City strongly prefers that biosolids be beneficially reused, rather than being disposed of by landfilling. The City considers land application of biosolids, use at a landfill for alternative daily or final cover, or other approved reuse methods to constitute beneficial reuse.

1.2 THE MATERIAL

The material consists of anaerobically digested wastewater biosolids and solids removed from the WPCP's oxidation ponds.

1.2.1 Anaerobically Digested Wastewater Biosolids

For the anaerobically digested biosolids, one or the other of the following dewatering methods is used:

1. During the dry season (approximately April through October), and when weather permits during the remainder of the year, the anaerobically digested biosolids are dewatered using a gravity drainage tile dewatering system. Subject to weather conditions, the material may be further dried on the adjacent asphalt paved drying area. The material directly off the dewatering beds contains between 16 and 20 percent solids and weighs approximately 1,800 pounds per cubic yard. After further drying, the solids content typically ranges from 35 to 70 percent total solids. Contractor shall remove this material approximately monthly (upon written request), directly from the asphalt drying area where dried material will be stockpiled, utilizing equipment which meets the requirements specified in Section 1.4 below, and transport and dispose/reuse the material. It is estimated that 500 to 2,000 tons (wet weight) of anaerobically digested biosolids will require removal from the paved drying area annually.
2. During extended wet periods in November through March, the anaerobically digested biosolids may be pumped directly to the storage lagoon on the north side of the dewatering beds (storage lagoon). Water is decanted from this lagoon during and at the end of the wet season. The biosolids are allowed to dry throughout the summer. Contractor shall be responsible for excavating and loading this material from the lagoon in the early fall, and for subsequent transportation and disposal/reuse.

Biosolids would typically not be placed in the storage lagoon after April 1 of each year. It is anticipated that the biosolids in the storage lagoon will dry to an overall average concentration of approximately 20 percent total solids at the time of removal. However, Contractor should expect to encounter variability in solids content within the storage lagoon stockpile. It may be necessary to mix and blend higher and lower concentration materials to facilitate excavation and loading. If the storage lagoon is used for anaerobically digested biosolids, it is estimated that up to 500 tons of material will be present in the lagoon at the time of removal. The dimensions of the lagoon are approximately 500 ft. by 100 ft. at the expected elevation of the sludge surface. The average depth of sludge, as calculated from those dimensions will be less than one-half foot, but the majority of the biosolids will be mounded in the east end of the lagoon.

1.2.2 Biosolids Removed From Oxidation Ponds

Biosolids removed from the oxidation ponds during the planned initial pilot study or subsequent full scale project will be dewatered to approximately 18 percent using a belt filter and then stored for further drying on the paved drying area or in the storage lagoon. It is anticipated that the pilot project will be conducted during the first year of the contract awarded as the result of this Request for Proposals and that 500 to 1000 tons of material will be generated. Amounts generated in subsequent years cannot be estimated at this time.

Biosolids removed from the oxidation ponds have been anaerobically stabilized over a long period of time, but were not "anaerobically digested" at elevated temperatures as defined in 40 CFR 503 Appendix B. However, these solids meet the Alternative 1 criteria for meeting Class B pathogen reduction requirements (monitoring of indicator organisms). In addition, the solids meet the Option 1 criteria for vector reduction requirements (reduction in volatile solids content).

1.2.3 Biosolids Quality

Biosolids from the both of the sources described in the previous two sub-sections are non-hazardous, based on the criteria described in CCR Section 66261, Title 22. Both materials also meet the 40 CFR Part 503 requirements for Class B biosolids land application. Results of analytical testing for the materials are included as Attachment E.

The wastewater biosolids may contain trace contaminants and pathogenic microorganisms. The City of Sunnyvale has carried out, and will continue to carry out, sampling and analysis as required by State and federal regulations. However, the City cannot guarantee the condition, quantity, or quality of the biosolids. Quantity, content and nature of the biosolids material may change, depending on the type of wastewater influent received for processing and other factors. Any additional verification testing required by the reuse or disposal site shall be conducted by the Contractor.

1.3 TRANSPORTATION REQUIREMENTS

Contractor shall transport the biosolids to either a landfill for disposal or to a beneficial reuse site where they shall be utilized in accordance with site specific-permits (or equivalent) and in accordance with applicable local, State, and federal regulations.

Contractor is responsible for all local, State, and federal regulatory requirements for the lawful transport and unloading of the wastewater biosolids. Contractor shall not exceed the gross highway weight allowance in pounds when loaded based on the length of the truck (bridge law) or 80,000 lbs, whichever is lower.

Hauling operations shall be performed in such a manner as to minimize the impact on existing Water Pollution Control Plant operations. Proposed haul routes and hours of operation shall be provided to the City prior to start of work. Such routes and hours of operation shall comply with all governmental agency requirements in the jurisdictions associated with this operation.

Biosolids shall be removed within fourteen (14) calendar days of City's issuance of a written request for such removal. If, at any time during the contract period, Contractor is not capable of removing accumulated biosolids within fourteen (14) days of issuance of a written request by the City, or within an alternate time schedule agreed to, in writing, by both parties within fourteen (14) days of the request, the City may elect to have the biosolids hauled and unloaded by an outside source.

1.4 EQUIPMENT REQUIRED

Contractor shall provide adequate equipment to perform the Work. Contractor shall furnish only experienced and skilled operators for equipment.

Contractor shall be solely responsible for the condition of its equipment. Only equipment in good working condition as judged by the City is acceptable. The City may reject pieces of equipment found to be in unsatisfactory condition.

In the event of any rejection by the City, Contractor shall remove the unsatisfactory equipment and replace it with good and acceptable equipment.

The Contractor shall conspicuously mark each tractor/trailer unit used in performing the services described in this Request for Proposals with the maximum legal weight of the unit when loaded and a corresponding "full load" indicator inside the trailer to guide loading.

The City shall not be responsible for damage to or theft of any property of Contractor or Contractor's agents on or off the City's property.

1.5 LOADING, POSSESSION, TRANSPORTATION AND UNLOADING

Contractor shall be responsible for all loading, transportation and unloading. Contractor shall verify that each load does not exceed the legal weight limit for the respective equipment being loaded prior to removing the trailer from the site. Contractor shall be responsible for coordination with appropriate authorities to properly transport the dewatered biosolids and conduct acceptable unloading operations to meet both the City's and the unloading site's requirements.

Contractor shall be responsible for controlling and abating any odor, dust, spillage, insect, vermin, or any other nuisance arising from the operation. The City will provide water and a washdown area for use by Contractor to keep the loading site and trailers clean and free of spillage.

Any spillage or discharge of material at the treatment plant or on public roads shall be promptly cleaned up by Contractor. If the City is required to clean up the spillage, all costs incurred will be deducted from monies owed to the Contractor.

Contractor shall prepare a contingency plan for responding to accidents or spills and submit this plan to the City for approval within twenty (20) calendar days from the date of issuance of Notice of Award to Contractor. See Attachment G for components of a typical contingency plan.

1.6 REMOVAL OF BIOSOLIDS FROM STORAGE LAGOON

If requested by the City, biosolids in the Storage Lagoon shall be removed during the first two weeks of October, or at another time designated by the City. At that time, Contractor shall remove all biosolids that have accumulated in the storage lagoon during the preceding year, or since previous removal. Contractor shall remove, transport, and dispose/reuse the biosolids in the storage lagoon in accordance with disposal site permits and with applicable local, state, and federal regulations. A safety plan shall be prepared for all operations associated with the services required by this Request for Proposals. Contractor shall restore the lagoon bottom to the depth and slope shown on attached Attachment D, and Contractor shall repair any damage to berms and access roads resulting from Contractor's activities.

Interstitial water may drain from the sludge into the excavated area during the sludge removal process. Contractor shall consider this possibility and include mitigating measures, if any, in its proposal pricing.

Accumulated water may be pumped to drainage pump station located at the west end of the paved drying area, if necessary. The sludge dewatering system's drainage collections system may be utilized for this purpose provided that such use does not interfere with dewatering operations.

1.6.1 Cleanup And Restoration Of Job Site

Contractor shall be responsible for the cleanup and restoration of the job site, haul routes and disposal site involved in the work subject to final inspection and acceptance by the City prior to final payment under the contract.

Contractor shall be responsible for the care and preservation of City property and adjacent or coterminous property. Any parts of such property injured, damaged or disturbed as a result of the work shall be restored in a manner acceptable the City at Contractor's expense.

1.6.2 Work Plan

Contractor shall submit a Work Plan prior to start of the work, describing in detail the proposed equipment, methods, sequencing and scheduling of the work, including removal of the sludge from the job site, truck loading operation, hauling operations and disposal operations. The Work Plan shall address all items in this Request for Proposals and any other items that Contractor or City deems appropriate. The Work Plan shall be submitted for approval by the City a minimum of twenty (20) calendar days prior to the start of work.

The Work Plan shall include the following:

1. Description of Proposed Equipment
2. Description of Sludge Removal and Loading Operation
3. Hauling Plan (Include routes, hours of operation and emergency spill plan.)
4. Disposal Operation Description (Include location and description of disposal site and method of disposal.)
5. Schedule of Work (Provide a schedule of the Work showing the individual operations, amount of time required and the sequencing of operations. Identify the estimated start and completion dates.)

1.7 DISPOSAL AND/OR BENEFICIAL REUSE

Contractor shall be responsible for transporting and hauling away the biosolids material to the Contractor-specified site(s) of agricultural landspreading, beneficial reuse, or landfill disposal in a safe clean manner and in accordance with all laws and regulations. Any permits, permit fees, other fees, or taxes shall be the responsibility of Contractor.

The biosolids shall become the property of Contractor at the time it is placed on Contractor's transportation equipment. Contractor shall thereafter be responsible for the transportation, and agricultural landspreading or other beneficial use, or landfill disposal in a lawful manner in accordance with the Regional Water Quality Control Board, the State Department of Health Services, the State Solid Waste Management Board, the Bay Area Air Quality Management District, and any other applicable local, State and federal agency requirements.

1.8 PERMITS

Before commencing work, Contractor shall submit to the City copies of all permits required by other governmental agencies for performing the work of loading, transporting and disposing or beneficially reusing the biosolids material.

For beneficial reuse, the permits shall include the permit or approval issued to the specified beneficial reuse site by the Regional Water Quality Control Board and other governmental agencies concerned (including, where applicable, County agencies), as necessary to specifically authorize the proposed beneficial use at the designated site(s).

For landfilling, Contractor shall provide documentation indicating that the specified landfill meets the design criteria specified in 40 CFR 258, Subtitle D and indicating that the biosolids material meets the Waste Acceptance Criteria (WAC), as defined by the Regional Water Quality Control Board, for the specified landfill. Such documentation shall be provided before commencing the Work. Any additional sampling and analyses required to demonstrate that the material meets the WAC for the specified landfill shall be Contractor's responsibility.

1.9 DOCUMENTATION

Contractor shall prepare an annual report for submittal to the City presenting data on the annual quantities, totals, loads, bills of lading and other relevant information gathered during the performance of the work.

For biosolids that are transported for beneficial reuse, Contractor shall provide documentation necessary for EPA 503 regulatory reporting requirements. This information shall include, but is not limited to, an application map of the reuse site showing the sections where City biosolids was applied during the prior year and documentation of the biosolids application rates.

1.10 RESPONSIBILITY OF CONTRACTOR

The City assumes no responsibility whatsoever for loss or damage of equipment owned or operated by the Contractor, its agents, or employees.

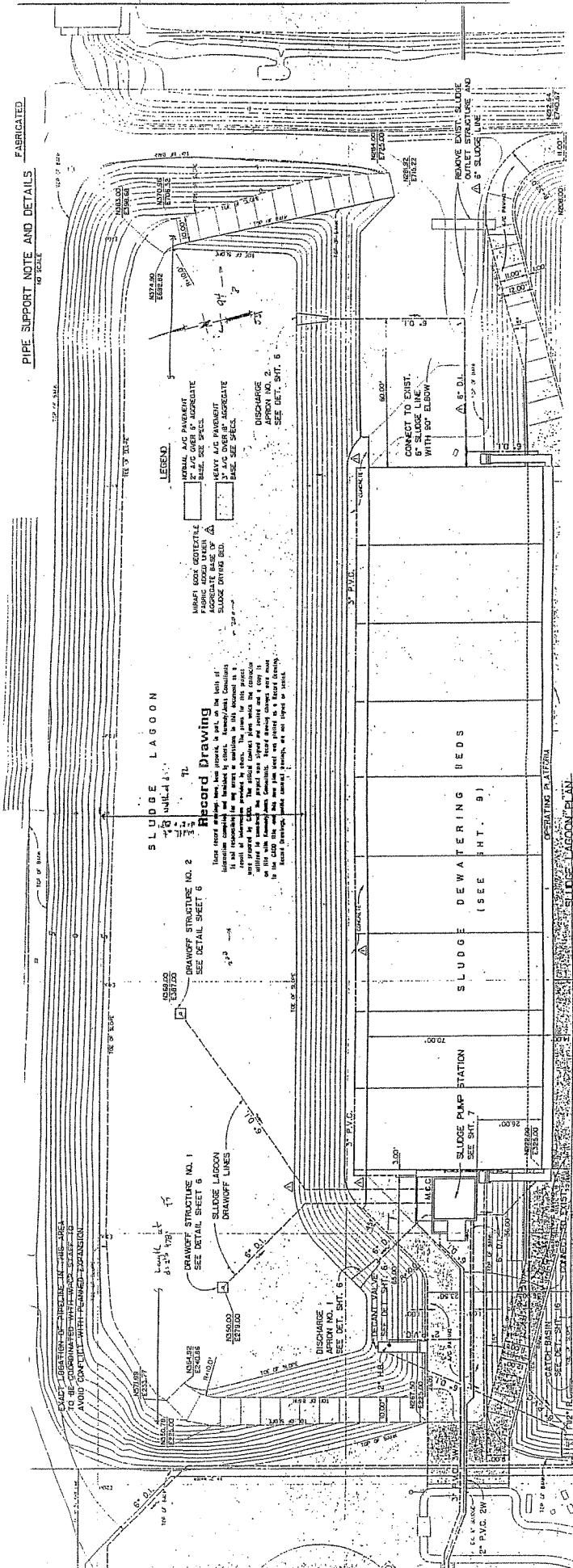
All safety orders, rules, and recommendations of the Division of Industrial Safety of the Department of Industrial Relations of the State of California applicable to the work specified in this Request for Proposals shall be obeyed and enforced by Contractor. Contractor shall comply with all applicable federal, state, and local laws, ordinances, codes, and regulations.

1.11 PRODUCTION RATE

Production rate of dewatered biosolids varies with seasonal conditions, variations in WPCP operations, and whether special projects (i.e pond cleaning project) are underway. Storage space is limited on the paved drying beds. The City estimates that the overall production rate will be between 50 and 350 wet tons in any 30-day period, and that removal from the WPCP site will be required on a monthly basis. However, actual collection frequency will be established by specific request from WPCP project manager. Quantity and frequency may be more or less than the planning values identified in this section.

1.13 INVOICES

The Contractor shall furnish invoices monthly. Invoices shall include the date of each load, certified weigh tags for each truck to verify actual biosolids removed from the treatment plant and the designation of the biosolids. Upon verification that the required information has been provided, the invoice will be approved for payment.



ATTACHMENT E-1
Sunnyvale WPCP - Pond Biosolids Sample Results

| Substance | Soluble Basis (Cal WET) | | | Total Basis | | | | | | | Reference Levels |
|------------|---------------------------------------|------------------------------------|-----------------------------|--|--|--|-------------------------------------|--|--|---------------------------|-------------------------------|
| | 11/15/01 Shallow Sample Result (mg/L) | 11/15/01 Deep Sample Result (mg/L) | Reference Level STLC (mg/L) | 11/15/01 Shallow Sample Result (mg/kg) | Equivalent Wet Weight at %TS = 50% (mg/kg) | Equivalent Dry Wt. Value (TS=100%) (mg/kg) | 11/15/01 Deep Sample Result (mg/kg) | Equivalent Wet Weight at %TS = 50% (mg/kg) | Equivalent Dry Wt. Value (TS=100%) (mg/kg) | TTLC ¹ (mg/kg) | 503 Regs ² (mg/kg) |
| Antimony | < 0.2 | < 0.2 | 15.0 | < 2.0 | < 20 | < 40 | < 2.0 | < 7.9 | < 16 | 500 | |
| Arsenic | < 0.1 | < 0.1 | 5.0 | < 0.8 | < 8 | < 16 | < 0.8 | < 3.2 | < 6.3 | 500 | 41 |
| Barium | 1.9 | 1.9 | 100 | 25 | 250 | 500 | 26.0 | 103 | 206 | 10000 | |
| Beryllium | < 0.02 | < 0.02 | 0.8 | < 0.2 | < 2 | < 4.0 | < 0.2 | < 0.8 | < 1.6 | 75 | |
| Cadmium | < 0.01 | 0.01 | 1 | 0.2 | 2 | 4.0 | 0.3 | 1.2 | 2.4 | 100 | 39 |
| Chromium | 0.38 | 0.45 | 500 | 8 | 80 | 160 | 10 | 40 | 79 | 2500 | |
| Cobalt | < 0.05 | < 0.05 | 80 | 0.6 | 6 | 12 | 1 | 3.2 | 6.3 | 8000 | |
| Copper | < 0.1 | < 0.1 | 25 | 38 | 380 | 760 | 39 | 155 | 310 | 2500 | 1500 |
| Lead | 0.4 | 0.4 | 5 | 6.1 | 61 | 122 | 7 | 28 | 56 | 1000 | 300 |
| Mercury | < 0.004 | < 0.004 | 0.2 | 0.13 | 1 | 2.5 | 0 | 0.6 | 1.2 | 20 | 17 |
| Molybdenum | 0.05 | < 0.05 | 350 | 3 | 30 | 60 | 3 | 12 | 24 | 3500 | |
| Nickel | 0.19 | 0.22 | 20 | 7 | 70 | 140 | 8 | 32 | 63 | 2000 | 420 |
| Selenium | < 0.2 | < 0.2 | 1 | 2 | 20 | 40 | < 2 | < 7.9 | < 16 | 100 | 36 |
| Silver | < 0.03 | < 0.03 | 5 | 3.3 | 33 | 66 | 4 | 15 | 31 | 500 | |
| Thallium | < 0.1 | < 0.1 | 7 | < 2 | < 20 | < 40 | < 2 | < 7.9 | < 16 | 700 | |
| Vanadium | 0.07 | 0.09 | 24 | 1.7 | 17 | 34 | 2 | 9.5 | 19 | 2400 | |
| Zinc | 5.3 | 5.8 | 250 | 87 | 870 | 1740 | 96 | 381 | 762 | 5000 | 2800 |
| Cyanide | | | | < 0.08 | < 1 | < 16 | < 0.08 | < 0.3 | < 0.6 | --- | |
| Sample %TS | | | | 5.0% | | | 12.6% | | | | |
| Sample %VS | | | | 48.6% | | | 22.1% | | | | |

Analyses by Caltest, reported 12/10/01

1. STLC and TTLC Reference Levels are California Hazardous Waste criteria. TTLC applies to wet weight.

2. Land application criteria for "clean" sludge, from Table 3 of 40 CFR 503.13 (monthly average). Applies to equivalent dry weight (shaded cells).



February 19, 2001

Ms. Lauren Fondahl
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105-3901

Dear Ms. Fondahl,

Enclosed is a Biosolids Annual Report for sludge disposed of in 2000 for the City of Sunnyvale Wastewater Pollution Control Plant (WPCP). The annual biosolids report was prepared in accordance with the 40 CFR 503 requirements and follows a format suggested by EPA Region 9.

The enclosed annual biosolids report represents sludge removed by BFI from the WPCP in 2000 for beneficial reuse as Alternative Daily Cover (ADC) at sanitary landfills. As per a phone conversation with you on February 8, 2000 (with Kristin Kerr at EOA, Inc.), sludge used for ADC is not considered land application or surface disposal and neither Part II or III of the EPA example format report needs to be completed. Sample results were still reported for your information.

Please contact John Addeo at (408) 730-7260 if you have any questions concerning the annual report.

Sincerely;

A handwritten signature in black ink that reads "Marvin A. Rose".

Marvin A. Rose
Director of Public Works

cc: RWQCB
EOA, Inc.

**CITY OF SUNNYVALE
BIOSOLIDS ANNUAL REPORT 2000**

I. GENERAL INFORMATION

1. Name of Facility: City of Sunnyvale Water Pollution Control Plant

2. Contact Person: John Addeo

Telephone: WPCP Operations Manager
(408) 730-7260

3. Mailing Address: P.O. Box 3707
Sunnyvale, CA 94088-3707

Facility Address: 1444 Borregas Ave.
Sunnyvale, CA 94089

4. MGD (average): 15.1

Biosolids production this year: 276 dry tons

Biosolids transferred to another facility for further treatment: None

Volume in storage from previous years): 26 dry tons

5. Use and disposal: 547 dry tons for Landfill Daily Cover

0 dry tons for Land Application (complete Part III)

0 dry tons for Surface Disposal in 1997(complete Part II)

6. Sludge Treatment Process

All solids from the primary clarifiers, and a portion of the algae "float" from the air floatation tanks are pumped to anaerobic digesters. Solids are anaerobically digested at approximately 100 degrees F, with a detention time of at least 30 days. Effluent from the digesters is conditioned with a polymer and dewatered on gravity drainage tiles to approximately 15-20% total solids. Supernatant from dewatering is retained within the treatment processes. Dewatered solids are removed from the gravity drainage tiles, spread over a paved drying area, and solar dried to approximately 50-75% total solids.

7. Sludge Sampling

Stockpiles of dewatered biosolids from the biosolids final drying area were sampled and analyzed quarterly. For each of the four sampling events, approximately 20 grab samples were collected and combined in equal proportions into a single composite sample. Approximately one biosolids stockpile was sampled during each sampling event. The samples were analyzed for priority pollutant metals and total solids. Additional analyses of volatile and semi-volatile organics were performed to meet the requirements of the reuse site and the City's Pretreatment Program Order. The biosolids were removed by BFI and applied to sanitary landfills as Alternative Daily Cover. Laboratory data sheets are presented in Appendix A.

PRIORITY POLLUTANT ANALYSIS (mg/kg dry wt)
 COMPOSITE SLUDGE SAMPLES FOR SLUDGE REMOVED 1999

| Pollutant | 2/09/00 | 5/11/00 | 8/15/00 | 11/06/00 | | | |
|------------|---------|---------|---------|----------|--|--|--|
| Arsenic | 3.1 | 3.2 | 3.3 | 3.7 | | | |
| Cadmium | 1.2 | 1.8 | 1.7 | 1.2 | | | |
| Copper | 309 | 331 | 349 | 314 | | | |
| Lead | 41 | 49 | 55 | 47 | | | |
| Mercury | 4.0 | 3.5 | 1.2 | 4.7 | | | |
| Molybdenum | 8.6 | 14 | 13 | 12 | | | |
| Nickel | 29 | 39 | 37 | 30 | | | |
| Selenium | 5.2 | 7.0 | 8.3 | 5.9 | | | |
| Zinc | 1323 | 1796 | 1664 | 1650 | | | |

8. Pathogens

The sludge is Class B quality sludge. Referring to 40 CFR PART 503 Appendix B - Pathogen Treatment Processes, Class B quality sludge is met by a Process to Significantly Reduce Pathogens (PSRP). This PSRP is anaerobic digestion.

9. Vector Attraction

Vector Attraction Reduction is met by volatile solids in the sewage sludge are reduced by a minimum of 38 percent, referring to 40 CFR PART 503.33(b)(1).

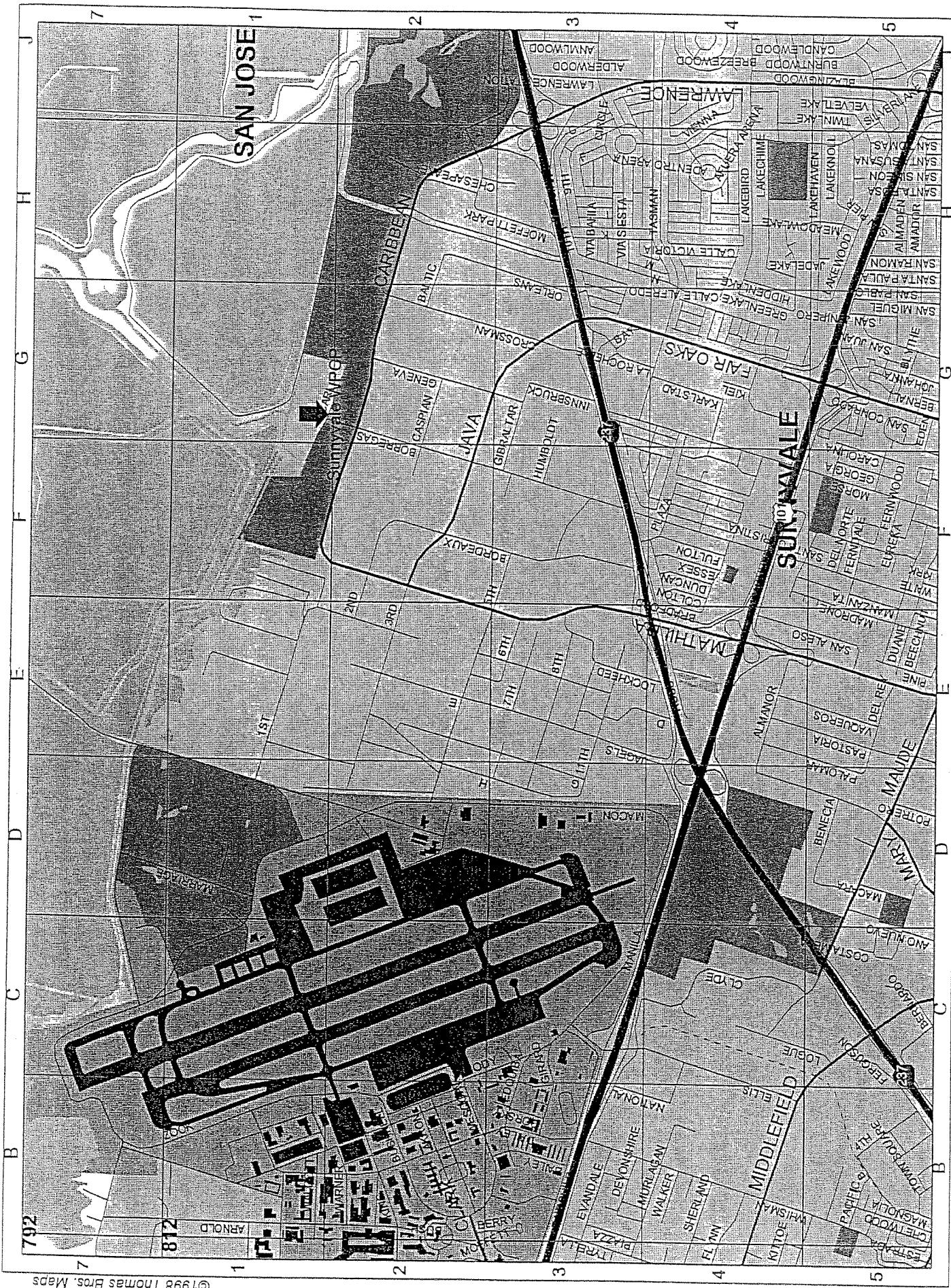
II. SURFACE DISPOSAL AND LONG TERM STORAGE

N/A

III. LAND APPLICATION OF SLUDGE

N/A

Attachment F



ATTACHMENT 3
BIOSOLIDS HAULING CONTINGENCY PLAN

Introduction

In the day-to-day business of hauling biosolids from the Wastewater Treatment Plant, accidents and spills may occur at any time due to the condition of the route, traffic problems, weather, or equipment malfunction. Without proper contingency plans, accidents could cause nuisance problems along the route.

The preparation of plans for dealing with road accidents and spills will enable the Contractor and the City to clarify expectations, roles, and responsibilities.

Plan Contents

The typical Biosolids Hauling Contingency Plan shall consist of a three-ring binder to be carried in each biosolids-hauling truck and readily available to the driver.

The binder shall contain the following information:

- Table of Contents
- Transportation Section
- Emergency Procedures Section
- Emergency Contacts Section
- Illustrations
- Basic First Aid Principles
- Incident Report Forms

The Transportation Section shall discuss the responsibility of the parties, on-board safety equipment, safety training, public relations, equipment maintenance, truck routes, and any other applicable subjects.

The Emergency Procedures Section shall discuss incidental protocol, determining the extent of the incident, non-spill incident procedures, and spill cleanup procedures.

The Emergency Contact Section shall describe who will be called in the event of an incident, and in what priority, subcontractor contacts who can be called for cleanup assistance (including telephone numbers), and the division of responsibility if an incident occurs.

The Illustrations Section shall contain maps showing the routes to biosolids unloading destinations to allow the driver and dispatcher to clearly discuss accident site information.

The section of Basic First Aid is for the driver's information because she/he may be the first person to the scene of an accident. It can be a suitable pamphlet or card published by a recognized authority (i.e., American Red Cross).

The binder shall contain a supply of Incident Report Forms.

Appendix A-1

First Quarter Analytical Results



1885 N. Kelly Rd. • Napa, California 94558

(707) 258-4000 • Fax: (707) 226-1001

CERTIFIED ENVIRONMENTAL SERVICES
CALIFORNIA ELAP #1664

INORGANIC ANALYTICAL RESULTS

LAB ORDER No.:

A020340

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| ANALYTE | RESULT | R.L. | UNITS | D.F. | METHOD | ANALYZED | OC BATCH | NOTES |
|---------|--------|------|-------|------|--------|----------|----------|-------|
|---------|--------|------|-------|------|--------|----------|----------|-------|

LAB NUMBER: A020340-6

SAMPLE ID: A1-GRAB

SAMPLED: 10 FEB 00 08:00

| | | | | | | | | |
|---------|-------|-------|------|---|-------|----------|------------|---|
| Phenols | 0.030 | 0.005 | mg/L | 1 | 420.2 | 02.25.00 | I000009PHE | 1 |
|---------|-------|-------|------|---|-------|----------|------------|---|

LAB NUMBER: A020340-7

SAMPLE ID: T2 GRAB

SAMPLED: 10 FEB 00 08:00

| | | | | | | | | |
|---------|-------|-------|------|---|-------|----------|------------|---|
| Phenols | 0.008 | 0.005 | mg/L | 1 | 420.2 | 02.25.00 | I000009PHE | 1 |
|---------|-------|-------|------|---|-------|----------|------------|---|

LAB NUMBER: A020340-8

SAMPLE ID: I GRAB

SAMPLED: 10 FEB 00 08:00

| | | | | | | | | |
|---------|-------|-------|------|---|-------|----------|------------|---|
| Phenols | 0.022 | 0.005 | mg/L | 1 | 420.2 | 02.25.00 | I000009PHE | 1 |
|---------|-------|-------|------|---|-------|----------|------------|---|

NUMBER: A020340-9

SAMPLE ID: E3 GRAB

SAMPLED: 10 FEB 00 08:00

| | | | | | | | | |
|---------|-------|-------|------|---|-------|----------|------------|---|
| Phenols | 0.008 | 0.005 | mg/L | 1 | 420.2 | 02.25.00 | I000009PHE | 1 |
|---------|-------|-------|------|---|-------|----------|------------|---|

LAB NUMBER: A020340-14

SAMPLE ID: T3 GRAB

SAMPLED: 10 FEB 00 08:00

| | | | | | | | | |
|---------|-------|-------|------|---|-------|----------|------------|---|
| Phenols | 0.006 | 0.005 | mg/L | 1 | 420.2 | 02.25.00 | I000009PHE | 1 |
|---------|-------|-------|------|---|-------|----------|------------|---|

LAB NUMBER: A020340-15

SAMPLE ID: SLUDGE PILE COMP

SAMPLED: 09 FEB 00

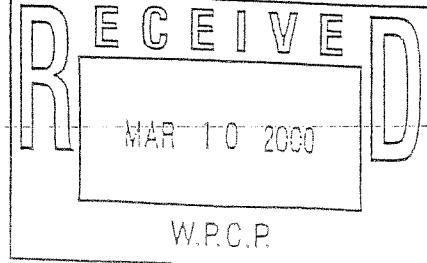
| | | | | | | | | |
|----------------|-----|-----|-------|----|-------|----------|------------|-----|
| Antimony, STLC | ND | 0.2 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 2 |
| Antimony, TTLC | ND | 2. | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 3.4 |
| Arsenic, STLC | ND | 0.1 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 2 |
| Arsenic, TTLC | 1.8 | 0.8 | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 3.4 |
| Barium, STLC | 5.8 | 0.5 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 2 |

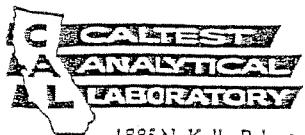
1) Sample was composited by equal volume prior to analysis.

2) Sample Preparation on 02-23-00 using 3010A on WET Extract

3) Sample Preparation on 02-16-00 using 3050B

Result expressed as wet weight of sample.





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CERTIFIED ENVIRONMENTAL SERVICES
CALIFORNIA ELAP #1664

INORGANIC ANALYTICAL RESULTS

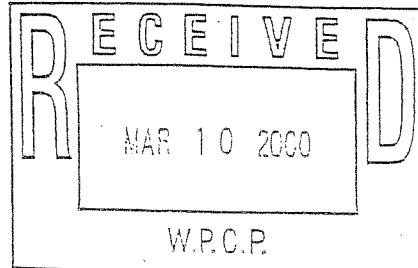
LAB ORDER No.:

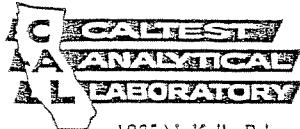
A020340

Page 3 of 39

| ANALYTE | RESULT | R.L. | UNITS | D.F. | METHOD | ANALYZED | OC BATCH | NOTES |
|---|--------|-------|-------|------|--------|----------|------------|-------|
| LAB NUMBER: A020340-15 (continued) | | | | | | | | |
| Barium, TTLC | 170. | 1. | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Beryllium, STLC | ND | 0.02 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 3 |
| Beryllium, TTLC | ND | 0.2 | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Cadmium, STLC | 0.05 | 0.01 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 3 |
| Cadmium, TTLC | 0.7 | 0.2 | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Chromium, STLC | 0.58 | 0.05 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 3 |
| Chromium, TTLC | 15. | 1. | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Cobalt, STLC | 0.09 | 0.05 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 3 |
| Cobalt, TTLC | 3.8 | 0.4 | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Copper, STLC | 1.8 | 0.1 | mg/L | 1 | 6010B | 02.29.00 | A000157ICP | 4 |
| Copper, TTLC | 180. | 1. | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Lead, STLC | 1.0 | 0.1 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 3 |
| Lead, TTLC | 24. | 0.6 | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Mercury, STLC | ND | 0.004 | mg/L | 1 | 7470A | 02.23.00 | A000140MER | 5 |
| Mercury, TTLC | 2.3 | 0.4 | mg/kg | 20 | 7471A | 02.23.00 | A000141MER | 2.6 |
| Molybdenum, STLC | 0.25 | 0.05 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 3 |
| Molybdenum, TTLC | 5. | 1. | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Nickel, STLC | 0.67 | 0.05 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 3 |
| Nickel, TTLC | 17. | 1. | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Niobium, STLC | ND | 0.1 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 3 |
| Selenium, TTLC | 3. | 2. | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Silver, STLC | ND | 0.03 | mg/L | 1 | 6010B | 02.29.00 | A000157ICP | 4 |
| Silver, TTLC | 11. | 0.6 | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Thallium, STLC | ND | 0.1 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 3 |
| Thallium, TTLC | ND | 2. | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Vanadium, STLC | 0.38 | 0.02 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 3 |
| Vanadium, TTLC | 8.6 | 0.4 | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| Zinc, STLC | 57. | 0.2 | mg/L | 1 | 6010B | 02.24.00 | A000143ICP | 3 |
| Zinc, TTLC | 770. | 4. | mg/kg | 10 | 6010B | 02.18.00 | A000131ICP | 1.2 |
| California Waste Extraction Test (STLC) | | | | 1 | CA WET | | A000135STC | 7 |
| Cyanide, total | 3.7 | 0.8 | mg/kg | 10 | 9010A | 02.22.00 | I000014CYA | 2 |
| Solids, Total | 58.2 | 0.1 | % | 1 | 160.3 | 02.17.00 | I000013SOL | |
| Solids, Total Volatile | 53.1 | 0.1 | % | 1 | 160.4 | 03.01.00 | I000001VS | 2 |

- 1) Sample Preparation on 02-16-00 using 3050B
- 2) Result expressed as wet weight of sample.
- 3) Sample Preparation on 02-23-00 using 3010A on WET Extract
- 4) Sample Preparation on 02-28-00 using 3010A on WET Extract
- 5) Sample Preparation on 02-22-00 using 7470A on WET Extract
- 6) Sample Preparation on 02-22-00 using 7471A
- 7) Sample Preparation on 02-16-00





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CERTIFIED ENVIRONMENTAL SERVICES
CALIFORNIA ELAP #1664

ORGANIC ANALYTICAL RESULTS

LAB ORDER No.:

A020340

Page 36 of 39

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | OC BATCH | NOTES |
|---------|--------|------|-------|------|----------|----------|-------|
|---------|--------|------|-------|------|----------|----------|-------|

LAB NUMBER: A020340-15 (continued)

SAMPLE ID: SLUDGE PILE COMP

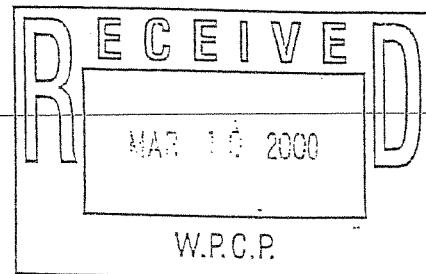
SAMPLED: 09 FEB 00

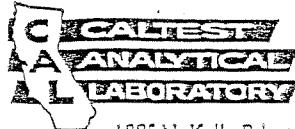
METHOD: EPA 8270

SEMICVOLATILE ORGANIC PLUS
TENTATIVELY IDENTIFIED COMPOUNDS
(continued)

1 02.19.00 S000011BNA

| | | | |
|-----------------------------|-----|------|-------|
| Benzo(b)fluoranthene | ND | 3.3 | mg/kg |
| Benzo(k)fluoranthene | ND | 3.3 | mg/kg |
| Benzo(ghi)perylene | ND | 3.3 | mg/kg |
| Benzo(a)pyrene | ND | 3.3 | mg/kg |
| Benzylbutylphthalate | ND | 3.3 | mg/kg |
| 4-Bromophenyl phenyl ether | ND | 3.3 | mg/kg |
| Carbazole | ND | 3.3 | mg/kg |
| 4-Chloroaniline | 3.5 | 3.3 | mg/kg |
| bis(2-chloroethoxy)methane | ND | 3.3 | mg/kg |
| bis(2-chloroethyl)ether | ND | 3.3 | mg/kg |
| bis(2-chloroisopropyl)ether | ND | 6.7 | mg/kg |
| 2-Chloronaphthalene | ND | 3.3 | mg/kg |
| * Chlorophenyl phenyl ether | ND | 3.3 | mg/kg |
| ysene | ND | 3.3 | mg/kg |
| Ubienzo(a,h)anthracene | ND | 3.3 | mg/kg |
| Dibenzofuran | ND | 3.3 | mg/kg |
| 1,2-Dichlorobenzene | ND | 3.3 | mg/kg |
| 1,3-Dichlorobenzene | ND | 3.3 | mg/kg |
| 1,4-Dichlorobenzene | ND | 3.3 | mg/kg |
| 3,3-Dichlorobenzidine | ND | 17. | mg/kg |
| Diethyl phthalate | ND | 3.3 | mg/kg |
| Dimethyl phthalate | ND | 3.3 | mg/kg |
| Di-n-butylphthalate | ND | 17. | mg/kg |
| 2,4-Dinitrotoluene | ND | 3.3 | mg/kg |
| 2,6-Dinitrotoluene | ND | 3.3 | mg/kg |
| Di-n-octylphthalate | ND | 3.3 | mg/kg |
| 1,2-Diphenylhydrazine | ND | 3.3 | mg/kg |
| bis(2-Ethylhexyl)phthalate | 19. | 17. | mg/kg |
| Fluoranthene | ND | 3.3 | mg/kg |
| Fluorene | ND | 3.3 | mg/kg |
| Hexachlorobenzene | ND | 3.3 | mg/kg |
| Hexachlorobutadiene | ND | 17. | mg/kg |
| Hexachlorocyclopentadiene | ND | 17. | mg/kg |
| Hexachloroethane | ND | 3.3 | mg/kg |
| Indeno(1,2,3-cd)pyrene | ND | 3.3 | mg/kg |
| Isophorone | ND | 17. | mg/kg |
| 2-Methylnaphthalene | ND | 6.7 | mg/kg |
| 3-Methylphenol (m-cresol) | ND | 0.67 | ug/kg |
| Naphthalene | ND | 3.3 | mg/kg |
| 2-Nitroaniline | ND | 3.3 | mg/kg |





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CERTIFIED ENVIRONMENTAL SERVICES
CALIFORNIA ELAP #1664.

LAB ORDER No.:

A020340

Page 37 of 39

ORGANIC ANALYTICAL RESULTS

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | QC BATCH | NOTES |
|---------|--------|------|-------|------|----------|----------|-------|
|---------|--------|------|-------|------|----------|----------|-------|

LAB NUMBER: A020340-15 (continued)

SAMPLE ID: SLUDGE PILE COMP

SAMPLED: 09 FEB 00

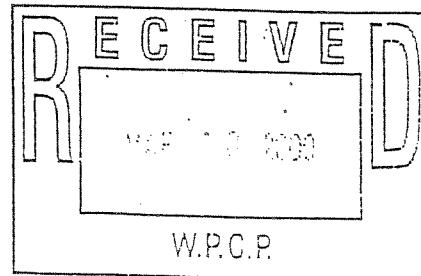
METHOD: EPA 8270

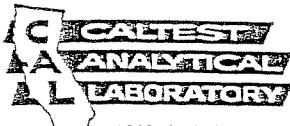
SEMICVOLATILE ORGANIC PLUS
TENTATIVELY IDENTIFIED COMPOUNDS

(continued)

| | | | |
|--|------|------|-------|
| 3-Nitroaniline | ND | 3.3 | mg/kg |
| 4-Nitroaniline | ND | 3.3 | mg/kg |
| Nitrobenzene | ND | 3.3 | mg/kg |
| N-Nitrosodimethylamine | ND | 17. | mg/kg |
| N-Nitrosodiphenylamine | ND | 3.3 | mg/kg |
| N-Nitrosodi-n-propylamine | ND | 3.3 | mg/kg |
| Phenanthrene | ND | 3.3 | mg/kg |
| Pyrene | ND | 3.3 | mg/kg |
| Pyridine | ND | 6.7 | mg/kg |
| 1,2,4-Trichlorobenzene | ND | 6.7 | mg/kg |
| Benzoic Acid | ND | 13. | mg/kg |
| Benzyl Alcohol | ND | 3.3 | mg/kg |
| Chloro-3-methylphenol | ND | 3.3 | mg/kg |
| Chlorophenol | ND | 3.3 | mg/kg |
| 2,4-Dichlorophenol | ND | 3.3 | mg/kg |
| 2,4-Dimethylphenol | ND | 3.3 | mg/kg |
| 2,4-Dinitrophenol | ND | 6.7 | mg/kg |
| 2-Methyl-4,6-dinitrophenol | ND | 6.7 | mg/kg |
| 2-Methylphenol (o-Cresol) | ND | 6.7 | mg/kg |
| m/p-Cresol | ND | 0.67 | mg/kg |
| 2-Nitrophenol | ND | 3.3 | mg/kg |
| 4-Nitrophenol | ND | 6.7 | mg/kg |
| Phenol | ND | 3.3 | mg/kg |
| Pentachlorophenol | ND | 3.3 | mg/kg |
| 2,4,5-Trichlorophenol | ND | 3.3 | mg/kg |
| 2,4,6-Trichlorophenol | ND | 3.3 | mg/kg |
| Surrogate Nitrobenzene-d5 | 82. | | |
| Surrogate 2-Fluorobiphenyl | 96. | | |
| Surrogate Terphenyl-d14 | 121. | | |
| Surrogate 2-Fluorophenol | 85. | | |
| Surrogate Phenol-d6 | 94. | | |
| Surrogate 2,4,6-Tribromophenol | 82. | | |
| Nonyl-Phenol(Tic) | 46. | 13. | mg/Kg |
| 4-(2,2,3,3-Tetramethylbutyl)- Phenol(Tic) | 21. | 13. | mg/Kg |
| 4-(1,1,3,3-Tetramethylbutyl)- Phenol(Tic) | 33. | 13. | mg/Kg |
| Phytol(Tic) | 18. | 13. | mg/Kg |

1 02.19.00 S000011BNA





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CERTIFIED ENVIRONMENTAL SERVICES
CALIFORNIA ELAP #1664

ORGANIC ANALYTICAL RESULTS

LAB ORDER No.:

A020340

Page 38 of 39

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | QC BATCH | NOTES |
|---------|--------|------|-------|------|----------|----------|-------|
|---------|--------|------|-------|------|----------|----------|-------|

LAB NUMBER: A020340-15 (continued)

SAMPLE ID: SLUDGE PILE COMP

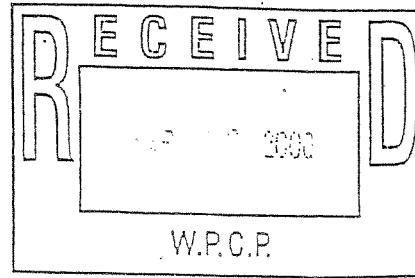
SAMPLED: 09 FEB 00

METHOD: EPA 8260A

VOLATILE ORGANIC & TENTATIVELY IDENTIFIED COMPOUNDS

1 02.15.00 V000025MSA 1,2,3

| | | | |
|------------------------------------|----|-------|-------|
| Benzene | ND | 0.005 | mg/kg |
| Bromobenzene | ND | 0.005 | mg/kg |
| Bromochloromethane | ND | 0.005 | mg/kg |
| Bromodichloromethane | ND | 0.005 | mg/kg |
| Bromoform | ND | 0.005 | mg/kg |
| Bromomethane (Methyl Bromide) | ND | 0.02 | mg/kg |
| n-Butylbenzene | ND | 0.005 | mg/kg |
| sec-Butylbenzene | ND | 0.005 | mg/kg |
| tert-Butylbenzene | ND | 0.005 | mg/kg |
| Carbon Tetrachloride | ND | 0.005 | mg/kg |
| Chlorobenzene | ND | 0.005 | mg/kg |
| Chloroethane (Ethyl Chloride) | ND | 0.02 | mg/kg |
| Chloroform | ND | 0.005 | mg/kg |
| 1-Chloromethane (Methyl Chloride) | ND | 0.02 | mg/kg |
| Chlorotoluene | ND | 0.005 | mg/kg |
| 4-Chlorotoluene | ND | 0.005 | mg/kg |
| Dibromochloromethane | ND | 0.005 | mg/kg |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 0.005 | mg/kg |
| 1,2-Dibromoethane (EDB) | ND | 0.005 | mg/kg |
| Dibromomethane | ND | 0.005 | mg/kg |
| 1,2-Dichlorobenzene | ND | 0.005 | mg/kg |
| 1,3-Dichlorobenzene | ND | 0.005 | mg/kg |
| 1,4-Dichlorobenzene | ND | 0.005 | mg/kg |
| Dichlorodifluoromethane (F-12) | ND | 0.01 | mg/kg |
| 1,1-Dichloroethane | ND | 0.005 | mg/kg |
| 1,2-Dichloroethane (EDC) | ND | 0.005 | mg/kg |
| 1,1-Dichloroethene | ND | 0.005 | mg/kg |
| cis-1,2-Dichloroethene | ND | 0.005 | mg/kg |
| trans-1,2-Dichloroethene | ND | 0.005 | mg/kg |
| 1,2-Dichloropropane | ND | 0.005 | mg/kg |
| 1,3-Dichloropropane | ND | 0.005 | mg/kg |
| 2,2-Dichloropropane | ND | 0.005 | mg/kg |
| 1,1-Dichloropropene | ND | 0.005 | mg/kg |
| Dichlorotrifluoroethane (F-123) | ND | 0.005 | mg/kg |
| Ethylbenzene | ND | 0.005 | mg/kg |
| Hexachlorobutadiene | ND | 0.005 | mg/kg |
| Isopropylbenzene | ND | 0.005 | mg/kg |
| p-Isopropyltoluene | ND | 0.005 | mg/kg |



1) Sample Preparation on 02-15-00 using EPA 5030

~ Result expressed as wet weight of sample.

, The internal standard recovery was low due to matrix interference. Re-analysis confirmed the results.



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CERTIFIED ENVIRONMENTAL SERVICES
CALIFORNIA ELAP #1664

ORGANIC ANALYTICAL RESULTS

LAB ORDER No.:

A020340

Page 39 of 39

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | OC BATCH | NOTES |
|---------|--------|------|-------|------|----------|----------|-------|
|---------|--------|------|-------|------|----------|----------|-------|

LAB NUMBER: A020340-15 (continued)

SAMPLE ID: SLUDGE PILE COMP

SAMPLED: 09 FEB 00

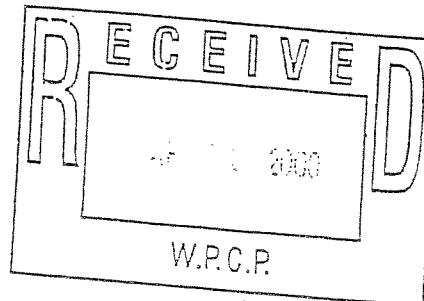
METHOD: EPA 8260A

VOLATILE ORGANIC & TENTATIVELY
IDENTIFIED COMPOUNDS

(continued)

| | | | |
|---------------------------------------|------|-------|-------|
| Methylene Chloride | ND | 0.03 | mg/kg |
| Methyl tert-Butyl Ether (MTBE) | ND | 0.005 | mg/kg |
| Naphthalene | ND | 0.005 | mg/kg |
| n-Propylbenzene | ND | 0.005 | mg/kg |
| Styrene | ND | 0.005 | mg/kg |
| 1,1,1,2-Tetrachloroethane | ND | 0.005 | mg/kg |
| 1,1,2,2-Tetrachloroethane | ND | 0.005 | mg/kg |
| Tetrachloroethene (PCE) | ND | 0.005 | mg/kg |
| Toluene | ND | 0.005 | mg/kg |
| 1,2,3-Trichlorobenzene | ND | 0.005 | mg/kg |
| 1,2,4-Trichlorobenzene | ND | 0.005 | mg/kg |
| 1,1,1-Trichloroethane (TCA) | ND | 0.005 | mg/kg |
| 1,2-Trichloroethane | ND | 0.005 | mg/kg |
| 1-Chloroethene (TCE) | ND | 0.005 | mg/kg |
| Trichlorofluoromethane (F-11) | ND | 0.005 | mg/kg |
| 1,2,3-Trichloropropane | ND | 0.005 | mg/kg |
| Trichlorotrifluoroethane (F-113) | ND | 0.01 | mg/kg |
| 1,2,4-Trimethylbenzene | ND | 0.005 | mg/kg |
| 1,3,5-Trimethylbenzene | ND | 0.005 | mg/kg |
| Vinyl Chloride | ND | 0.005 | mg/kg |
| Xylenes (Total) | ND | 0.005 | mg/kg |
| No Additional Compounds (TIC) Present | ND | 1. | mg/kg |
| Surrogate Dibromofluoromethane | 105. | | % |
| Surrogate 1,2-DCA-d4 | 129. | | % |
| Surrogate Toluene-d8 | 87. | | % |
| Surrogate 4-BFB | 116. | | % |

1 02.15.00 V000025MSA



Caltest Analytical Laboratory

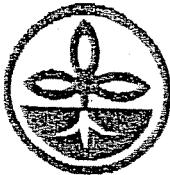
Client: City of Sunnyvale WPCP

| LAB NUMBER | SAMPLE DESCRIPTION | DATE SAMPLED | ANALYTE NAME | TTLC RESULT | REPORTING LIMIT | UNITS | Regulatory Criteria |
|------------|--------------------|--------------|--------------|--------------|-----------------|-------|---------------------|
| | | | | TTLC (mg/kg) | STLC (mg/L) | | |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Antimony | ND | 2. | mg/kg | 15 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Arsenic | 0.9 | 0.8 | mg/kg | 5.0 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Barium | 94. | 1. | mg/kg | 100 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Beryllium | ND | 0.2 | mg/kg | 75 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Cadmium | 0.5 | 0.2 | mg/kg | 100 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Chromium | 9. | 1. | mg/kg | 5 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Cobalt | 2.1 | 0.4 | mg/kg | 80 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Copper | 94. | 1. | mg/kg | 25 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Lead | 14. | 0.6 | mg/kg | 5.0 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Mercury | 1.0 | 0.2 | mg/kg | 0.2 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Molybdenum | 4. | 1. | mg/kg | 350 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Nickel | 11. | 1. | mg/kg | 20 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Selenium | 2. | 2. | mg/kg | 100 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Silver | 6.4 | 0.6 | mg/kg | 5 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Thallium | ND | 2. | mg/kg | 700 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Vanadium | 4.9 | 0.4 | mg/kg | 24 |
| A050357-1 | L7815 SLUDGE PILE | 05/11/2000 | Zinc | 510. | 4. | mg/kg | 250 |
| | | | | | | | 5,000 |

Regulatory criteria is provided for informational purposes only. Please refer to Title 22, section 66261.24 for further review.

Appendix A-2

Second Quarter Analytical Results



Soil and Plant Laboratory, Inc.

www.soilandplantlaboratory.com

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Santa Clara, CA 95050
408-727-0330 phone
408-727-5725 fax

SANTA CLARA OFFICE

June 9, 2000

Lab No. 22706

CITY OF SUNNYVALE - WPCP
P. O. Box 3707
Sunnyvale, CA 94088

Attn: Rosanna Lacarta

RE: SLUDGE PILE COMPOSITE L7831-SL
P.O. #20973-B

The sample that had been collected 5/10-11/00 was received 5/16. Compared to the last sample received 2/14 this is not too different in total elemental makeup but very different regarding the soluble and available fractions. Moisture content is also much higher.

Immediately available nitrogen is the rate limiting factor and the abundance of inorganic nitrogen in the ammonic form still reflects an immature condition.

Reaction is moderately alkaline and with lime content low the sludge is not expected to affect pH of the soil being amended. Salinity is lower than last found and reflects lower levels of sulfate, sodium and chloride.

In fertilizer terminology, total nutrient content on a dry weight basis would be 3.50% total nitrogen, 3.57% phosphoric acid and 0.14% potash. The estimated carbon to nitrogen ratio at 9.1 reflects the high nitrogen value. The proportion of phosphorus and iron that are in immediately available form is quite a bit higher than last seen while proportions of copper, zinc and manganese are lower.

A maximum rate limit of 7% amended soil volume is suggested. This rate would supply 193 pounds per acre of immediately available nitrogen and an organic nitrogen residual of about 645 pounds. The actual mineralization rate is not known but assuming 25% during the first year this would provide an additional 160 pounds nitrogen and this would satisfy the annual need of a fast growing cover crop. This rate would initially correct any degree of soil deficiency of nitrogen, phosphorus, sulfate and. Salinity increase would be only 0.5 dS/m. This rate would increase organic content of a sandy loam soil by about 1.7% and this may help stimulate the soils biological activity.

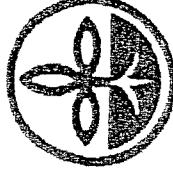
This 7% volume rate is equivalent to 55 cubic yards per acre or 54 tons at the high as-received moisture content of 68.8%. This is equivalent to 2.47 pounds per square foot. This rate is based on incorporation to a depth of 6 inches.

| | | | | | |
|-------------------|----------------|---------|------------------|------------|----|
| Post-it® Fax Note | 7671 | Date | 17/01 | # of pages | 18 |
| To | W. Sherrill | From | Regina | | |
| Co./Dept. | B-C-A | Co. | City St. S. Vile | | |
| Phone # | | Phone # | | | |
| Fax # | (408) 261-8322 | Fax # | | | |

2-854

JIM WEST

Fax 3 pages and mail.



Soil and Plant Laboratory, Inc.
www.soilandplantlaboratory.com

352 Mathew Street
 Santa Clara, CA 95050
 408-727-0330 phone
 408-727-5125 fax

CITY OF SUNNYVALE
 P O Box 3707
 Sunnyvale, CA 94088
 Attention: ROSARIA LACARRA

Sample Rec'd: 5/16/00

COMPOST EVALUATION
 (A91)

Lab No. 22706
 SLUDGE PILE

P.O. No 20973-B

TOTAL NUTRIENT LEVELS

| Sam ple # | Parts Per Million | | | | | | | | | | | | Log Number |
|-----------------|-------------------|------|------|------|------|------|------|------|------|-----|-------|----|------------|
| | N | P | K | Ca | Mg | Na | S | Si | Cu | Zn | Mn | B | |
| 1 | 3.50 | 1.56 | 0.12 | 4.00 | 0.61 | 0.18 | 1.26 | 3.64 | 1756 | 650 | 11060 | 35 | L7831-SL |

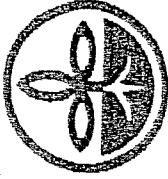
AVAILABLE NUTRIENT LEVELS

| Sam ple # | Parts Per Million Parts Dry Soil | | | | | | | | | | | | Sat Ext Cl | Sat Ext Na | Sat Ext Mg | Sat Ext B | Sat Ext SO4 | Sat Ext ECe | dilute acid |
|-----------------|----------------------------------|------|-----|-----|------|------|-----|------|------|-----|-----|-----|---------------|---------------|---------------|--------------|----------------|----------------|----------------|
| | NH4 | NO3 | Po4 | N | P | K | Ca | Mg | Cu | Zn | Mn | Fe | | | | | | | |
| 1 | 163 | 8.0 | 5.7 | 32 | 5500 | 1108 | 897 | 4551 | 1051 | 8.0 | 280 | 118 | 556 | 0.31 | 30.3 | 10.3 | 10.3 | 0.676 | |
| 728 | Low | 17.2 | 5.7 | 0.7 | 0.4 | 0.6 | 0.5 | 7.7 | 1.5 | 1.6 | 1.6 | 1.6 | 10.1 | 16.4 | 29.2 | | | | |

PHYSICAL PROPERTIES

| Sam ple # | Fraction of Sample Passing 1/2 Inch Screen | | | | | | | | | | | | Est. C/N | Ratio | | |
|-----------------|--|---------|---------|------|-------|----------|----------|--------|----------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| | As Received | Mineral | Organic | Dry | Water | Moisture | Fraction | Matter | Fraction | Organic | 1/2 lbs/yd3 | 1/2 lbs/yd3 | 1/2 lbs/yd3 | 1/2 lbs/yd3 | 1/2 lbs/yd3 | 1/2 lbs/yd3 |
| 1 | 0.0 | 0.0 | 1964 | 68.8 | 13350 | 613 | 352 | 261 | 57.4 | | | | | | | 9.1 |

Salinity (EC_e (ds/m at 25 deg.C.) by sat ext method. Available Major Nutrients by sodium chloride extraction (phosphorus by sodium bicarbonate extraction). Micronutrients by DTPA extraction. Interpretation guides below each element (1.0=predicted sufficiency level for average fertility requiring crops). TEC (listed below half sat) = est. Total Exchangeable Cations (meq/kg total nutrient values expressed as element in oven dried sample ground to 40 mesh. Total N corrected for moisture content) is determined on as received sample. N=nitrogen, P=phosphorus, K=potassium, Ca=calcium, Mg=magnesium, Na=sodium, S=sulfur, Cl=chloride, Cu=copper, Zn=zinc, Mn=manganese, Fe=iron and B=boron.



Soil and Plant Laboratory, Inc.
www.soilandplantlaboratory.com

352 Mathew Street
 Santa Clara, CA 95050
 408-727-0339 phone
 408-727-5125 fax

Sample 1 - L7631-SL Log Number 00-A12821

| ELEMENT OF INTEREST | AMOUNT PER CUBIC YARD | | AMOUNT PER TON, As Received at 69.8% Moisture | | AVAILABLE TOTAL AVAILABLE | AVAILABLE % OF TOTAL |
|---------------------|-----------------------|------------|--|------------|---------------------------------|-------------------------|
| | TOTAL | AVAILABLE | TOTAL | AVAILABLE | | |
| Nitrogen | 21.45 lbs | 3.44 lbs | 21.84 lbs | 3.50 lbs | 16.03 | |
| Phosphorus | 9.55 lbs | 0.68 lbs | 9.72 lbs | 0.69 lbs | 7.11 | |
| Potassium | 0.74 lbs | 0.55 lbs | 0.75 lbs | 0.56 lbs | 74.79 | |
| Calcium | 24.51 lbs | 2.79 lbs | 24.96 lbs | 2.94 lbs | 11.38 | |
| Magnesium | 3.74 lbs | 0.64 lbs | 3.01 lbs | 0.66 lbs | 17.23 | |
| Sulfur | 7.72 lbs | 0.93 lbs | 7.86 lbs | 0.95 lbs | 12.04 | |
| Copper | 3.57 ozs | 0.08 ozs | 3.63 ozs | 0.08 ozs | 2.20 | |
| Zinc | 17.2 ozs | 2.75 ozs | 17.53 ozs | 2.80 ozs | 15.9 | |
| Manganese | 6.37 ozs | 1.16 ozs | 6.49 ozs | 1.18 ozs | 18.2 | |
| Iron | 108. ozs | 5.45 ozs | 110.4 ozs | 5.55 ozs | 5.03 | |
| Boron | 0.34 ozs | 0.0099 ozs | 0.35 ozs | 0.0101 ozs | 2.90 | |
| Organic Matter | 352. lbs | | 358. lbs | | | |

The above results reflect only the fraction smaller than 1/2 inch. If a substantial portion of this sample is larger than 1/2 inch, the above values should be adjusted accordingly if further screening is not intended. The coarse fractions will react much slower with the soil and not have significant impact upon soil nutrition over the short term.

ENVIRONMENTAL ANALYSES

LAB ORDER No.:

A050357

Page 1 of 5

REPORT of ANALYTICAL RESULTSReport Date:
Received Date:20 JUN 2000
12 MAY 2000Client: Rosanna Lacarra
City of Sunnyvale-WPCP
P.O. BOX 3707
Sunnyvale, CA 94088

Sampled by:

CLIENT

Project: SLUDGE PILE

| <u>Lab Number</u> | <u>Sample Identification</u> | <u>Matrix</u> | <u>Sampled Date/Time</u> |
|-------------------|------------------------------|---------------|--------------------------|
| A050357-1 | L7815 SLUDGE PILE | SLUDGE | 11 MAY 00 |

Todd M. Albertson
Project Manager

Christine Horn
Laboratory Director

CALTEST authorizes this report to be reproduced only in its entirety.
 Results are specific to the sample as submitted and only to the parameters reported.
 All analyses performed by EPA Methods or Standard Methods (SM) 18th Ed. except where noted.
 Results of 'ND' mean not detected at or above the listed Reporting Limit (R.L.).
 'D.F.' means Dilution Factor and has been used to adjust the listed Reporting Limit (R.L.).
 Acceptance Criteria for all Surrogate recoveries are defined in the QC Spike Data Reports.

1885 North Kelly Road • Napa, California 94558
 (707) 258-4000 • Fax: (707) 226-1001 • e-mail: caltest@caltestlab.com

ENVIRONMENTAL ANALYSES

LAB ORDER No.:

A050357

Page 2 of 5

INORGANIC ANALYTICAL RESULTS

| <u>ANALYTE</u> | <u>RESULT</u> | <u>R.L.</u> | <u>UNITS</u> | <u>D.F.</u> | <u>METHOD</u> | <u>ANALYZED</u> | <u>OC BATCH</u> | <u>NOTES</u> | |
|------------------------------|---------------|-------------|--------------|-------------|---------------|-----------------|-----------------|--------------|---|
| LAB NUMBER: A050357-1 | | | | | | | | | |
| SAMPLE ID: L7815 SLUDGE PILE | | | | | | | | | |
| SAMPLED: 11 MAY 00 | | | | | | | | | |
| Antimony | ND | 2. | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Arsenic | 0.9 | 0.8 | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Barium | 94. | 1. | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Beryllium | ND | 0.2 | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Cadmium | 0.5 | 0.2 | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Chromium | 9. | 1. | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Cobalt | 2.1 | 0.4 | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Copper | 94. | 1. | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Lead | 14. | 0.6 | mg/kg | 10 | 7471A | 05.16.00 | A000389MER | 2.3 | |
| Mercury | 1.0 | 0.2 | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Molybdenum | 4. | 1. | mg/kg | 10 | 6010B | 05.18.00 | A000395ICP | 1.2 | |
| Nickel | 11. | 1. | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Selenium | 2. | 2. | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Silver | 6.4 | 0.6 | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Thallium | ND | 2. | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Vanadium | 4.9 | 0.4 | mg/kg | 10 | 6010B | 05.17.00 | A000395ICP | 1.2 | |
| Zinc | 510. | 4. | mg/kg | 10 | 6010B | 05.17.00 | I000038CYA | 2 | |
| Cyanide, total | 0.9 | 0.4 | mg/kg | 5 | 9010A | 05.22.00 | I000035SOL | | |
| Solids, Total | 28.4 | 0.1 | g | 1 | | 160.3 | 05.15.00 | | |
| Solids, Total Volatile | 42.8 | 0.1 | g | 1 | | 160.4 | 05.17.00 | I000004VS | 2 |

- 1) Sample Preparation on 05-16-00 using 3050B
 2) Result expressed as wet weight of sample.
 3) Sample Preparation on 05-15-00 using 7471A

ENVIRONMENTAL ANALYSES

LAB ORDER No.:

A050357

Page 3 of 5

ORGANIC ANALYTICAL RESULTS

| <u>ANALYTE</u> | <u>RESULT</u> | <u>R.L.</u> | <u>UNITS</u> | <u>D.F.</u> | <u>ANALYZED</u> | <u>OC BATCH</u> | <u>NOTES</u> |
|--------------------------------|---------------|-------------|--------------|-------------|-----------------|-----------------|--------------|
| LAB NUMBER: A050357-1 | | | | | | | |
| SAMPLE ID: L7815 SLUDGE PILE | | | | | | | |
| SAMPLED: 11 MAY 00 | | | | | | | |
| METHOD: EPA 8270 | | | | | | | |
| SEMIVOLATILE ORGANIC COMPOUNDS | | | | | | | |
| Acenaphthene | ND | 1.7 | mg/kg | | | | |
| Acenaphthylene | ND | 1.7 | mg/kg | | | | |
| Aniline | ND | 3.4 | mg/kg | | | | |
| Anthracene | ND | 1.7 | mg/kg | | | | |
| Benzidine | ND | 6.5 | mg/kg | | | | |
| Benzo(a)anthracene | ND | 1.7 | mg/kg | | | | |
| Benzo(b)fluoranthene | ND | 1.7 | mg/kg | | | | |
| Benzo(k)fluoranthene | ND | 1.7 | mg/kg | | | | |
| Benzo(ghi)perylene | ND | 1.7 | mg/kg | | | | |
| Benz(a)pyrene | ND | 1.7 | ng/kg | | | | |
| Benzylbutylphthalate | ND | 1.7 | ng/kg | | | | |
| 4-Bromophenyl phenyl ether | ND | 1.7 | ng/kg | | | | |
| Carbazole | ND | 1.7 | ng/kg | | | | |
| 4-Chloroaniline | ND | 1.7 | ng/kg | | | | |
| bis(2-chloroethoxy)methane | ND | 1.7 | ng/kg | | | | |
| bis(2-chloroethyl)ether | ND | 3.4 | ng/kg | | | | |
| bis(2-chloroisopropyl)ether | ND | 1.7 | ng/kg | | | | |
| 2-Chloronaphthalene | ND | 1.7 | ng/kg | | | | |
| 4-Chlorophenyl phenyl ether | ND | 1.7 | ng/kg | | | | |
| Chrysene | ND | 1.7 | ng/kg | | | | |
| Dibenzo(a,h)anthracene | ND | 1.7 | ng/kg | | | | |
| Dibenzofuran | ND | 1.7 | ng/kg | | | | |
| 1,2-Dichlorobenzene | ND | 1.7 | ng/kg | | | | |
| 1,3-Dichlorobenzene | ND | 1.7 | ng/kg | | | | |
| 1,4-Dichlorobenzene | ND | 8.5 | ng/kg | | | | |
| 3,3-Dichlorobenzidine | ND | 1.7 | ng/kg | | | | |
| Diethyl phthalate | ND | 1.7 | ng/kg | | | | |
| Dimethyl phthalate | ND | 8.5 | ng/kg | | | | |
| Di-n-butylphthalate | ND | 1.7 | ng/kg | | | | |
| 2,4-Dinitrotoluene | ND | 1.7 | ng/kg | | | | |
| 2,6-Dinitrotoluene | ND | 1.7 | ng/kg | | | | |
| Di-n-octylphthalate | ND | 1.7 | ng/kg | | | | |
| 1,2-Diphenylhydrazine | ND | 8.5 | ng/kg | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 1.7 | ng/kg | | | | |
| Fluoranthenes | ND | 1.7 | ng/kg | | | | |
| Fluorene | ND | 1.7 | ng/kg | | | | |
| Hexachlorobenzene | ND | 8.5 | ng/kg | | | | |
| Hexachlorobutadiene | ND | 8.5 | ng/kg | | | | |

1) Sample Preparation on 05-16-00 using EPA 3650

2) Result expressed as wet weight of sample.

3) Sample volumes altered in prep in an effort to reduce matrix effects resulting in (a) higher reporting

limit(s).

ENVIRONMENTAL ANALYSES

LAB ORDER No.:

A050357

Page 4 of 5

ORGANIC ANALYTICAL RESULTS

| <u>ANALYTE</u> | <u>RESULT</u> | <u>R.L.</u> | <u>UNITS</u> | <u>D.F.</u> | <u>ANALYZED</u> | <u>QC BATCH</u> | <u>NOTES</u> |
|---|---------------|-------------|--------------|-------------|-----------------|-----------------|--------------|
| LAB NUMBER: A050367-1 (continued) | | | | | | | |
| SAMPLE ID: L7815 SLUDGE PILE | | | | | | | |
| SAMPLED: 11 MAY 00 | | | | | | | |
| METHOD: EPA 8270 | | | | | | | |
| SEMIVOLATILE ORGANIC COMPOUNDS (continued) | | | | | | | |
| Hexachlorocyclopentadiene | ND | 8.5 | mg/kg | | | | |
| Hexachloroethane | ND | 1.7 | mg/kg | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 1.7 | mg/kg | | | | |
| Isophorone | ND | 8.5 | ng/kg | | | | |
| 2-Methylnaphthalene | ND | 3.4 | mg/kg | | | | |
| 3-Methylphenol (m-cresol) | ND | 0.67 | ug/kg | | | | |
| Naphthalene | ND | 1.7 | mg/kg | | | | |
| 2-Nitroaniline | ND | 1.7 | mg/kg | | | | |
| 3-Nitroaniline | ND | 1.7 | mg/kg | | | | |
| 4-Nitroaniline | ND | 1.7 | ng/kg | | | | |
| Nitrobenzene | ND | 8.5 | ng/kg | | | | |
| N-Nitrosodimethylamine | ND | 1.7 | ng/kg | | | | |
| N-Nitrosodiphenylamine | ND | 1.7 | ng/kg | | | | |
| N-Nitrosodi-n-propylamine | ND | 1.7 | ng/kg | | | | |
| Phenanthrene | ND | 1.7 | mg/kg | | | | |
| Pyrene | ND | 3.4 | mg/kg | | | | |
| Pyridine | ND | 3.4 | mg/kg | | | | |
| 1,2,4-Trichlorobenzene | ND | 5. | mg/kg | | | | |
| Aldrin | ND | 5. | ng/kg | | | | |
| alpha-BHC | ND | 5. | ng/kg | | | | |
| beta-BHC | ND | 5. | ng/kg | | | | |
| delta-BHC | ND | 5. | ng/kg | | | | |
| gamma-BHC (Lindane) | ND | 10. | ng/kg | | | | |
| Chlordane | ND | 5. | ng/kg | | | | |
| 4,4'-DDD | ND | 5. | ng/kg | | | | |
| 4,4'-DDE | ND | 5. | ng/kg | | | | |
| 4,4'-DDT | ND | 5. | ng/kg | | | | |
| Dieldrin | ND | 5. | ng/kg | | | | |
| Endosulfan I | ND | 5. | ng/kg | | | | |
| Endosulfan II | ND | 5. | ng/kg | | | | |
| Endosulfan Sulfate | ND | 5. | ng/kg | | | | |
| Endrin | ND | 5. | ng/kg | | | | |
| Endrin Aldehyde | ND | 5. | ng/kg | | | | |
| Heptachlor | ND | 5. | ng/kg | | | | |
| Heptachlor Epoxide | ND | 5. | ng/kg | | | | |
| Methoxychlor | ND | 100. | ng/kg | | | | |
| Toxaphene | ND | 100. | ng/kg | | | | |
| PCB 1016 | ND | 100. | ng/kg | | | | |
| PCB 1221 | ND | 100. | ng/kg | | | | |
| PCB 1232 | ND | 100. | ng/kg | | | | |
| PCB 1242 | ND | 100. | ng/kg | | | | |

ENVIRONMENTAL ANALYSES

LAB ORDER No.:

A050357

Page 5 of 5

ORGANIC ANALYTICAL RESULTS

| <u>ANALYTE</u> | <u>RESULT</u> | <u>R.L.</u> | <u>UNITS</u> | <u>D.F.</u> | <u>ANALYZED</u> | <u>QC BATCH</u> | <u>NOTES</u> |
|----------------|---------------|-------------|--------------|-------------|-----------------|-----------------|--------------|
|----------------|---------------|-------------|--------------|-------------|-----------------|-----------------|--------------|

LAB NUMBER: A050357-1 (continued)
 SAMPLE ID: L7815 SLUDGE PILE
 SAMPLED: 11 MAY 00
 METHOD: EPA 8270

SEMITOLATILE ORGANIC COMPOUNDS

(continued)

| | | | |
|---------------------------------------|------|------|-------|
| PCB 1248 | ND | 100. | mg/kg |
| PCB 1254 | ND | 100. | mg/kg |
| PCB 1260 | ND | 100. | mg/kg |
| Benzoic Acid | ND | 6.5 | mg/kg |
| Benzyl Alcohol | ND | 1.7 | mg/kg |
| 4-Chloro-3-methylphenol | ND | 1.7 | mg/kg |
| 2-Chlorophenol | ND | 1.7 | mg/kg |
| 2,4-Dichlorophenol | ND | 1.7 | mg/kg |
| 2,4-Dimethylphenol | ND | 1.7 | mg/kg |
| 2,4-Dinitrophenol | ND | 3.4 | mg/kg |
| 2-Methyl-4,6-dinitrophenol | ND | 3.4 | mg/kg |
| 2-Methylphenol (α -Cresol) | ND | 3.4 | mg/kg |
| m/p-Cresol | ND | 3.4 | mg/kg |
| 2-Nitrophenol | ND | 1.7 | mg/kg |
| 4-Nitrophenol | ND | 1.7 | mg/kg |
| Phenol | ND | 1.7 | mg/kg |
| Pentachlorophenol | ND | 1.7 | mg/kg |
| 2,4,5-Trichlorophenol | ND | 1.7 | mg/kg |
| 2,4,6-Trichlorophenol | ND | 1.7 | mg/kg |
| Surrogate Nitrobenzene-d ₆ | 102. | | |
| Surrogate 2-Fluorobiphenyl | 68. | | |
| Surrogate Terphenyl-d ₁₄ | 105. | | |
| Surrogate 2-Fluorophenol | 88. | | |
| Surrogate Phenol-d ₆ | 97. | | |
| Surrogate 2,4,6-Tribromophenol | 91. | | |

1 05.23.00 S00004DBNA

LAB NUMBER: A050357-1 (continued)

SAMPLE ID: L7815 SLUDGE PILE

SAMPLED: 11 MAY 00

METHOD: EPA 8260

Volatile Organic Cmpds

RR

1

1.2

- 1) Analysis performed by BC Laboratories, Inc., ELAP Certification #1186.
 2) RR = Refer to the attached reference laboratory report for the original certificate of analysis and supporting Quality Control data.

BC Laboratories, Inc.

Page 1

 Volatile Organic Analysis
 (EPA Method 8260)

CAL TEST ANALYTICAL
 1885 NORTH KELLY ROAD
 NAPA, CA 94558
 Attn: TODD ALBERTSON 707-258-4000

Date Reported: 05/30/2000
 Date Received: 05/18/2000
 Laboratory No.: 00-05945-1

Project Number: A050357
 Sample ID: L7815 SLUDGE PILE
 Sample Matrix: Sludge, Liquid

Date Collected: 05/11/2000
 Date Extracted: 05/24/2000
 Date Analyzed: 05/24/2000

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Practical Quantitation Limit</u> |
|-----------------------------|-------------------------|------------------------|-------------------------------------|
| Benzene | None Detected | ng/kg | 0.005 |
| Bromobenzene | None Detected | ng/kg | 0.005 |
| Bromoform | None Detected | ng/kg | 0.005 |
| Bromochloromethane | None Detected | ng/kg | 0.005 |
| Bromodichloromethane | None Detected | ng/kg | 0.005 |
| Bromomethane | None Detected | ng/kg | 0.005 |
| n-Butylbenzene | None Detected | ng/kg | 0.005 |
| sec-Butylbenzene | None Detected | ng/kg | 0.005 |
| tert-Butylbenzene | None Detected | ng/kg | 0.005 |
| Carbon tetrachloride | None Detected | ng/kg | 0.005 |
| Chlorobenzene | None Detected | ng/kg | 0.005 |
| Chloroethane | None Detected | ng/kg | 0.005 |
| Chloroform | None Detected | ng/kg | 0.005 |
| Chloromethane | None Detected | ng/kg | 0.005 |
| 2-Chlorotoluene | None Detected | ng/kg | 0.005 |
| 4-Chlorotoluene | None Detected | ng/kg | 0.005 |
| Dibromochloromethane | None Detected | ng/kg | 0.005 |
| 1,2-Dibromo-3-Chloropropane | None Detected | ng/kg | 0.005 |
| 1,2-Dibromoethane | None Detected | ng/kg | 0.005 |
| Dibromomethane | None Detected | ng/kg | 0.005 |
| 1,2-Dichlorobenzene | None Detected | ng/kg | 0.005 |
| 1,3-Dichlorobenzene | None Detected | ng/kg | 0.005 |
| 1,4-Dichlorobenzene | None Detected | ng/kg | 0.005 |
| Dichlorodifluoromethane | None Detected | ng/kg | 0.005 |
| 1,1-Dichloroethane | None Detected | ng/kg | 0.005 |
| 1,2-Dichloroethane | None Detected | ng/kg | 0.005 |
| 1,1-Dichloroethene | None Detected | ng/kg | 0.005 |
| cis-1,2-Dichloroethene | None Detected | ng/kg | 0.005 |
| trans-1,2-Dichloroethene | None Detected | ng/kg | 0.005 |
| 1,2-Dichloropropane | None Detected | ng/kg | 0.005 |
| 1,3-Dichloropropane | None Detected | ng/kg | 0.005 |
| 2,2-Dichloropropane | None Detected | ng/kg | 0.005 |
| 1,1-Dichloropropene | None Detected | ng/kg | 0.005 |
| cis-1,3-Dichloropropene | None Detected | ng/kg | 0.005 |
| trans-1,3-Dichloropropene | None Detected | ng/kg | 0.005 |
| Ethyl Benzene | None Detected | ng/kg | 0.005 |
| Hexachlorobutadiene | None Detected | ng/kg | 0.005 |
| Isopropylbenzene | 0.47 | ng/kg | 0.005 |
| p-Isopropyltoluene | None Detected | ng/kg | 0.01 |
| Methylene Chloride | None Detected | ng/kg | 0.005 |
| Naphthalene | None Detected | ng/kg | 0.005 |
| n-Propylbenzene | None Detected | ng/kg | 0.005 |
| Styrene | None Detected | ng/kg | 0.005 |

Volatile Organic Analysis
(EPA Method 8260)

Page 2

CAL TEST ANALYTICAL
1885 NORTH KELLY ROAD
NAPA, CA 94558
Attn: TODD ALBERTSON 707-258-4000

Date Reported: 05/30/2000
Date Received: 05/18/2000
Laboratory No.: 00-05945-1

Sample Description: A050357, 17815 SLUDGE PILE, 05/11/2000

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Practical Quantitation Limit</u> |
|---------------------------------------|-------------------------|------------------------|-------------------------------------|
| 1,1,1,2-Tetrachloroethane | None Detected | mg/kg | 0.005 |
| 1,1,2,2-Tetrachloroethane | None Detected | mg/kg | 0.005 |
| Tetrachloroethane | None Detected | mg/kg | 0.005 |
| Toluene | 2.7 | mg/kg | 0.3 *60 |
| 1,2,3-Trichlorobenzene | None Detected | mg/kg | 0.005 |
| 1,2,4-Trichlorobenzene | None Detected | mg/kg | 0.005 |
| 1,1,1-Trichloroethane | None Detected | mg/kg | 0.005 |
| 1,1,2-Trichloroethane | None Detected | mg/kg | 0.005 |
| Trichloroethane | None Detected | mg/kg | 0.005 |
| Trichlorofluoromethane | None Detected | mg/kg | 0.005 |
| 1,2,3-Trichloropropane | None Detected | mg/kg | 0.005 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | None Detected | mg/kg | 0.005 |
| 1,1,4-Trimethylbenzene | 0.011 | mg/kg | 0.005 |
| 1,3,5-Trimethylbenzene | None Detected | mg/kg | 0.005 |
| Vinyl Chloride | None Detected | mg/kg | 0.005 |
| Total Xylenes | 0.059 | mg/kg | 0.01 |
| Methyl-t-butylether | None Detected | mg/kg | 0.005 |

Quality Control Data

| <u>Surrogates</u> | <u>% Recovery</u> | <u>Control Limits</u> |
|-----------------------|-------------------|-----------------------|
| 1,2-Dichloroethane-d4 | 85. | 70-121 |
| Toluene-d8 | 85. | 81-117 |
| 4-Bromofluorobenzene | 77. | 74-121 |

Note: PQL's were raised due to high concentration of target analytes requiring sample dilution.

Flag Explanations:

*60 = Dilution factor is 60
California D.O.E.S. Cert. #1186

Stuart G. Buttram
Department Supervisor



H C Laboratories, Inc

H C LABORATORIES
QUALITY CONTROL REPORT
PRECISION & ACCURACY

Method 0160

CAL TRUST ANALYTICAL,
1085 NORTH KELLY ROAD
MAMM, CA 99556
TOM ALBERTSON

Samples Retested: 00-05945-1

Date of Report: 06/02/2000
Sample Matrix: Sludge, Liquid
QC Batch ID: 200005245-14R6G0

| Constituents | LOC Sample ID | Result | Result | MS | Spike | Spike | RSD | RSD | Precision | | Accuracy | |
|---------------------|---------------|---------|--------|-------|-------|-------|-------|-------|-----------|-------|----------|---------|
| | | | | | | | | | Level | Level | R.P.D. | Control |
| Benzene | 5434-7 | < 0.005 | 0.105 | 0.110 | 0.125 | 0.125 | 0.125 | 0.125 | 4- | 4- | 20.8% | 80.0% |
| 1,1-dichloroethane | 5434-7 | < 0.005 | 0.103 | 0.103 | 0.125 | 0.125 | 0.125 | 0.125 | 4- | 4- | 20.0% | 80.0% |
| Chlorobenzene | 5434-7 | < 0.015 | 0.117 | 0.126 | 0.125 | 0.125 | 0.125 | 0.125 | 4- | 4- | 20.1% | 80.0% |
| Chloroethane | 5434-7 | < 0.005 | 0.129 | 0.134 | 0.125 | 0.125 | 0.125 | 0.125 | 4- | 4- | 20.1% | 80.0% |
| 1,1-dichlorobenzene | 5434-7 | < 0.005 | 0.102 | 0.103 | 0.125 | 0.125 | 0.125 | 0.125 | 4- | 4- | 20.0% | 80.0% |
| 1,1-Dichloroethane | 5434-7 | < 0.005 | 0.110 | 0.107 | 0.125 | 0.125 | 0.125 | 0.125 | 4- | 4- | 20.0% | 80.0% |
| 1,1-Dichloroethene | 5434-7 | < 0.005 | 0.112 | 0.124 | 0.125 | 0.125 | 0.125 | 0.125 | 4- | 4- | 20.0% | 80.0% |
| Volume | 5434-7 | < 0.005 | 0.216 | 0.120 | 0.125 | 0.125 | 0.125 | 0.125 | 4- | 4- | 20.0% | 80.0% |
| Trichloroethene | 5434-7 | < 0.005 | 0.100 | 0.104 | 0.125 | 0.125 | 0.125 | 0.125 | 4- | 4- | 20.0% | 80.0% |

MS = Matrix spike; RSD = Matrix Spike Duplicate;

RPD = Relative Percent Difference

Quality Control Officer
Military Branch

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BC LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

Method 8260

CDL TEST ANALYTICAL
10905 NORTH KELLY ROAD
NAPA, CA 94558
TODD ALBERTSON

Samples Affected: 00-05945-1

Date of Report: 06/02/2000
Sample Matrix: Sludge, Liquid
QC Batch ID: 200005945-1 *0260

| Constituents | Method Blank Readings | Units |
|-----------------------------|-----------------------|-------|
| Benzene | < 0.005 | ug/kg |
| Dromobenzene | < 0.005 | ug/kg |
| Dromochloromethane | < 0.005 | ug/kg |
| Bromodichloromethane | < 0.005 | ug/kg |
| Bromoform | < 0.005 | ug/kg |
| Bromomethane | < 0.005 | ug/kg |
| n-Butylbenzene | < 0.005 | ug/kg |
| sec-Butylbenzene | < 0.005 | ug/kg |
| tert-Butylbenzene | < 0.005 | ug/kg |
| Carbon tetrachloride | < 0.005 | ug/kg |
| Chlorobenzene | < 0.005 | ug/kg |
| Chloroethane | < 0.005 | ug/kg |
| Chloroform | < 0.005 | ug/kg |
| Chloromethane | < 0.005 | ug/kg |
| 2-Chlorotoluene | < 0.005 | ug/kg |
| 4-Chlorotoluene | < 0.005 | ug/kg |
| Dibromochloromethane | < 0.005 | ug/kg |
| 1,2-Dibromo-3-chloropropane | < 0.005 | ug/kg |
| 1,2-Dibromoethane | < 0.005 | ug/kg |
| Dibromomethane | < 0.005 | ug/kg |
| 1,2-Dichlorobenzene | < 0.005 | ug/kg |
| 1,3-Dichlorobenzene | < 0.005 | ug/kg |
| 1,4-Dichlorobenzene | < 0.005 | ug/kg |
| Dichlorodifluoromethane | < 0.005 | ug/kg |
| 1,1-Dichloroethane | < 0.005 | ug/kg |
| 1,2-Dichloroethane | < 0.005 | ug/kg |
| 1,1-Dichloroethene | < 0.005 | ug/kg |
| cis-1,2-Dichloroethene | < 0.005 | ug/kg |
| trans-1,2-Dichloroethene | < 0.005 | ug/kg |
| 1,2-Dichloropropane | < 0.005 | ug/kg |

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8260

CAL TEST ANALYTICAL,
1885 NORTH KELLY ROAD
NAPA, CA 94558
TODD ALBERTSON

Samples Affected: 00-05945-1

Date of Report: 06/02/2000
Sample Matrix: Sludge, Liquid
QC Batch ID: 200005945-1-0260

| Constituents | Method Blank Readings | Method Units |
|---------------------------|-----------------------|--------------|
| 1,1-Dichloropropane | < 0.005 | mg/kg |
| 2,2-Dichloropropane | < 0.005 | mg/kg |
| 1,1-Dichloropropene | < 0.005 | mg/kg |
| cis-1,3-Dichloropropene | < 0.005 | mg/kg |
| trans-1,3-Dichloropropene | < 0.005 | mg/kg |
| Ethyl Benzene | < 0.005 | mg/kg |
| Hexachlorobutadiene | < 0.005 | mg/kg |
| Isopropylbenzene | < 0.005 | mg/kg |
| p-Isonorbornylbenzene | < 0.005 | mg/kg |
| Methylene Chloride | < 0.01 | mg/kg |
| Naphthalene | < 0.005 | mg/kg |
| n-Propylbenzene | < 0.005 | mg/kg |
| Styrene | < 0.005 | mg/kg |
| 1,1,1,2-Tetrachloroethane | < 0.005 | mg/kg |
| 1,1,2,2-Tetrachloroethane | < 0.005 | mg/kg |
| Tetrachloroethylene | < 0.005 | mg/kg |
| Toluene | < 0.005 | mg/kg |
| 1,2,3-Trichlorobenzene | < 0.005 | mg/kg |
| 1,2,4-Trichlorobenzene | < 0.005 | mg/kg |
| 1,1,1-Trichloroethane | < 0.005 | mg/kg |
| 1,1,2-Trichloroethane | < 0.005 | mg/kg |
| Trichloroethene | < 0.005 | mg/kg |
| Trichlorofluoromethane | < 0.005 | mg/kg |
| 1,2,3-Trichloropropane | < 0.005 | mg/kg |
| 1,1,2-Trichloro- | < 0.005 | mg/kg |
| 1,2,2-Trifluoroethane | < 0.005 | mg/kg |
| 1,2,4-Trimethylbenzene | < 0.005 | mg/kg |
| 1,3,5-Trimethylbenzene | < 0.005 | mg/kg |
| Vinyl Chloride | < 0.005 | mg/kg |
| Total Xylenes | < 0.01 | mg/kg |

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BCL Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

Method 8260

CAL TEST ANALYTICAL
1885 NORTH KELLY ROAD
NAPA, CA 94558
TODD ALBERTSON

Samples Affected: 00-05945-1

Date of Report: 06/02/2000
Sample Matrix: Sludge, Liquid
QC Batch ID: 200005945-1*9260

| Constituents | Method Blank Readings | Units |
|----------------------|-----------------------|-------|
| m & p-Xylene | < 0.005 | ug/kg |
| O-Xylene | < 0.005 | ug/kg |
| Methyl-t-butyl ether | < 0.005 | ug/kg |

Quality Control Officer

Anthony Rodano



B C Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)
Method B260

BCL TEST ANALYTICAL,
1895 NORTH KELLY ROAD
NAPA, CA 94558
TODD RABURTON

Samples Affected: 00-05945-1

Date of Report: 06/02/2000
Sample Matrix: Sludge, Liquid
QC Batch ID: 200005945-1#9260

| Constituents | QC Sample ID | Sample Result | Splice Level | Units | % Rec | Accuracy Control Limits |
|-----------------------|--------------|---------------|--------------|-------|-------|-------------------------|
| Benzene | CCV-4 | 0.130 | 0.125 | mg/kg | 104. | 80 - 120 |
| Bromo-dichloromethane | CCV-4 | 0.121 | 0.125 | mg/kg | 97. | 80 - 120 |
| Chlorobenzene | CCV-4 | 0.131 | 0.125 | mg/kg | 105. | 80 - 120 |
| Chloroethane | CCV-4 | 0.135 | 0.125 | mg/kg | 108. | 80 - 120 |
| 1,4-Dichlorobenzene | CCV-4 | 0.123 | 0.125 | mg/kg | 90. | 80 - 120 |
| 1,1-Dichloroethane | CCV-4 | 0.130 | 0.125 | mg/kg | 104. | 80 - 120 |
| 1,1-Dichloroethene | CCV-4 | 0.131 | 0.125 | mg/kg | 104. | 80 - 120 |
| Toluene | CCV-4 | 0.126 | 0.125 | mg/kg | 101. | 80 - 120 |
| Trichloroethene | CCV-4 | 0.124 | 0.125 | mg/kg | 99. | 80 - 120 |

Quality Control Officer

Michael Bonanno

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Appendix A-3

Third Quarter Analytical Results



ENVIRONMENTAL ANALYSES

LAB ORDER No.:

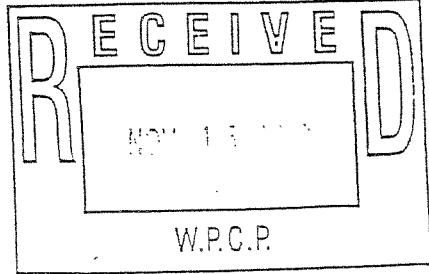
A080511

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INORGANIC ANALYTICAL RESULTS

| ANALYTE | RESULT | R.L. | UNITS | D.F. | METHOD | ANALYZED | OC BATCH | NOTES |
|------------------------|-----------|------|-------|------|--------|----------|------------|-------|
| LAB NUMBER: | A080511-1 | | | | | | | |
| SAMPLE ID: | L8026-SL | | | | | | | |
| SAMPLED: | 15 AUG 00 | | | | | | | |
| Antimony | ND | 4. | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2,3 |
| Arsenic | 2. | 2. | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Barium | 170. | 2. | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Beryllium | ND | 0.4 | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2,3 |
| Cadmium | 1.0 | 0.4 | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Chromium | 18. | 2. | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Cobalt | 4.4 | 0.8 | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Copper | 210. | 2. | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Lead | 33. | 1. | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Mercury | 0.7 | 0.1 | mg/kg | 5 | 7471A | 08.23.00 | A000688MER | 2,4 |
| Molybdenum | 8. | 2. | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Nickel | 22. | 2. | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Selenium | 5. | 4. | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Silver | 10. | 1. | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Thallium | ND | 4. | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2,3 |
| Vanadium | 11. | 0.8 | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Zinc | 1000. | 8. | mg/kg | 20 | 6010B | 08.30.00 | A000698ICP | 1,2 |
| Cyanide, total | 2.0 | 0.4 | mg/kg | 5 | 9010A | 08.22.00 | I000062CYA | 2 |
| Solids, Total | 60.1 | 0.1 | g | 1 | 160.3 | 08.22.00 | I000058SOL | |
| Solids, Total Volatile | 60.4 | 0.1 | g | 1 | 160.4 | 10.16.00 | | 2 |

- 1) Sample Preparation on 08-25-00 using 3050B
- 2) Results expressed as wet weight.
- 3) Sample diluted prior to analysis in an effort to reduce matrix interferences resulting in (a) higher reporting limit(s).
- 4) Sample Preparation on 08-22-00 using 7471A





ENVIRONMENTAL ANALYSES

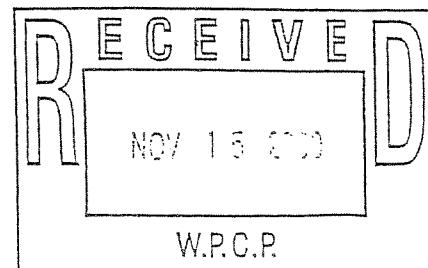
ORGANIC ANALYTICAL RESULTS

LAB ORDER No.:

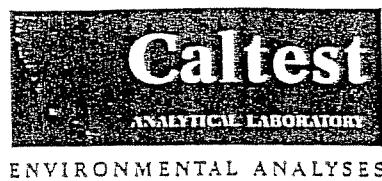
A080511

Page 3 of 8

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | QC BATCH | NOTES |
|--------------------------------|--------|------|-------|------|----------|----------|-------|
| LAB NUMBER: A080511-1 | | | | | | | |
| SAMPLE ID: L8026-SL | | | | | | | |
| SAMPLED: 15 AUG 00 | | | | | | | |
| METHOD: EPA 8270 | | | | | | | |
| SEMIVOLATILE ORGANIC COMPOUNDS | | | | | | | |
| Acenaphthene | ND | 0.55 | mg/kg | | | | |
| Acenaphthylene | ND | 0.55 | mg/kg | | | | |
| Aniline | ND | 1.2 | mg/kg | | | | |
| Anthracene | ND | 0.55 | mg/kg | | | | |
| Benzidine | ND | 2.2 | mg/kg | | | | |
| Benzo(a)anthracene | ND | 0.55 | mg/kg | | | | |
| Benzo(b)fluoranthene | ND | 0.55 | mg/kg | | | | |
| Benzo(k)fluoranthene | ND | 0.55 | mg/kg | | | | |
| Benzo(ghi)perylene | ND | 0.55 | mg/kg | | | | |
| Benzo(a)pyrene | ND | 0.55 | mg/kg | | | | |
| Benzylbutylphthalate | ND | 0.55 | mg/kg | | | | |
| 4-Bromophenyl phenyl ether | ND | 0.55 | mg/kg | | | | |
| Carbazole | ND | 0.55 | mg/kg | | | | |
| 4-Chloroaniline | ND | 0.55 | mg/kg | | | | |
| bis(2-chloroethoxy)methane | ND | 0.55 | mg/kg | | | | |
| bis(2-chloroethyl)ether | ND | 0.55 | mg/kg | | | | |
| bis(2-chloroisopropyl)ether | ND | 1.2 | mg/kg | | | | |
| 2-Chloronaphthalene | ND | 0.55 | mg/kg | | | | |
| 4-Chlorophenyl phenyl ether | ND | 0.55 | mg/kg | | | | |
| Chrysene | ND | 0.55 | mg/kg | | | | |
| Dibenzo(a,h)anthracene | ND | 0.55 | mg/kg | | | | |
| Dibenzofuran | ND | 0.55 | mg/kg | | | | |
| 1,2-Dichlorobenzene | ND | 0.55 | mg/kg | | | | |
| 1,3-Dichlorobenzene | ND | 0.55 | mg/kg | | | | |
| 1,4-Dichlorobenzene | ND | 0.55 | mg/kg | | | | |
| 3,3-Dichlorobenzidine | ND | 2.9 | mg/kg | | | | |
| Diethyl phthalate | ND | 0.55 | mg/kg | | | | |
| Dimethyl phthalate | ND | 0.55 | mg/kg | | | | |
| Di-n-butylphthalate | ND | 2.9 | mg/kg | | | | |
| 2,4-Dinitrotoluene | ND | 0.55 | mg/kg | | | | |
| 2,6-Dinitrotoluene | ND | 0.55 | mg/kg | | | | |
| Di-n-octylphthalate | ND | 0.55 | mg/kg | | | | |
| 1,2-Diphenylhydrazine | ND | 0.55 | mg/kg | | | | |
| bis(2-Ethylhexyl)phthalate | 36. | 2.9 | mg/kg | | | | |
| Fluoranthene | ND | 0.55 | mg/kg | | | | |
| Fluorene | ND | 0.55 | mg/kg | | | | |



- 1) Sample Preparation on 08-24-00 using EPA 3550
- 2) Results expressed as wet weight.
- 3) Sample volumes altered in prep in an effort to reduce matrix effects resulting in (a) higher reporting limit(s).
- 4) Due to matrix interferences present in the sample, surrogate recoveries failed to meet the QA/QC acceptance criteria.



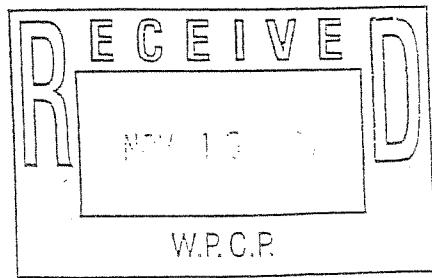
ORGANIC ANALYTICAL RESULTS

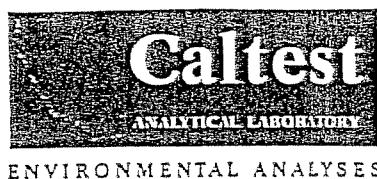
LAB ORDER No.:

A080511

Page 4 of 8

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | OC BATCH | NOTES |
|---|--------|------|-------|------|----------|----------|-------|
| LAB NUMBER: A080511-1 (continued) | | | | | | | |
| SAMPLE ID: L8026-SL | | | | | | | |
| SAMPLED: 15 AUG 00 | | | | | | | |
| METHOD: EPA 8270 | | | | | | | |
| SEMIVOLATILE ORGANIC COMPOUNDS (continued) | | | | | | | |
| Hexachlorobenzene | ND | 0.55 | mg/kg | | | | |
| Hexachlorobutadiene | ND | 2.9 | mg/kg | | | | |
| Hexachlorocyclopentadiene | ND | 2.9 | mg/kg | | | | |
| Hexachloroethane | ND | 0.55 | mg/kg | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.55 | mg/kg | | | | |
| Isophorone | ND | 2.9 | mg/kg | | | | |
| 2-Methylnaphthalene | ND | 1.2 | mg/kg | | | | |
| 3-Methylphenol (m-cresol) | ND | 0.67 | ug/kg | | | | |
| Naphthalene | ND | 0.55 | mg/kg | | | | |
| 2-Nitroaniline | ND | 0.55 | mg/kg | | | | |
| 3-Nitroaniline | ND | 0.55 | mg/kg | | | | |
| 4-Nitroaniline | ND | 0.55 | mg/kg | | | | |
| Nitrobenzene | ND | 0.55 | mg/kg | | | | |
| N-Nitrosodimethylamine | ND | 2.9 | mg/kg | | | | |
| N-Nitrosodiphenylamine | ND | 0.55 | mg/kg | | | | |
| N-Nitrosodi-n-propylamine | ND | 0.55 | mg/kg | | | | |
| Phenanthrene | ND | 0.55 | mg/kg | | | | |
| Pyrene | 3.4 | 0.55 | mg/kg | | | | |
| Pyridine | ND | 1.2 | mg/kg | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.2 | mg/kg | | | | |
| Aldrin | ND | 2. | mg/kg | | | | |
| alpha-BHC | ND | 2. | mg/kg | | | | |
| beta-BHC | ND | 2. | mg/kg | | | | |
| delta-BHC | ND | 2. | mg/kg | | | | |
| gamma-BHC (Lindane) | ND | 2. | mg/kg | | | | |
| Chlordane | ND | 4. | mg/kg | | | | |
| 4,4'-DDD | ND | 2. | mg/kg | | | | |
| 4,4'-DDE | ND | 2. | mg/kg | | | | |
| 4,4'-DDT | ND | 2. | mg/kg | | | | |
| Dieldrin | ND | 2. | mg/kg | | | | |
| Endosulfan I | ND | 2. | mg/kg | | | | |
| Endosulfan II | ND | 2. | mg/kg | | | | |
| Endosulfan Sulfate | ND | 2. | mg/kg | | | | |
| Endrin | ND | 2. | mg/kg | | | | |
| Endrin-Aldehyde | ND | 2. | mg/kg | | | | |
| Heptachlor | ND | 2. | mg/kg | | | | |
| Heptachlor Epoxide | ND | 2. | mg/kg | | | | |
| Methoxychlor | ND | 2. | mg/kg | | | | |
| Toxaphene | ND | 34. | mg/kg | | | | |
| PCB 1016 | ND | 34. | mg/kg | | | | |
| PCB 1221 | ND | 34. | mg/kg | | | | |





LAB ORDER No.:

A080511

Page 5 of 8

ORGANIC ANALYTICAL RESULTS

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | QC BATCH | NOTES |
|---------|--------|------|-------|------|----------|----------|-------|
|---------|--------|------|-------|------|----------|----------|-------|

LAB NUMBER: A080511-1 (continued)

SAMPLE ID: L8026-SL

SAMPLED: 15 AUG 00

METHOD: EPA 8270

SEMICVOLATILE ORGANIC COMPOUNDS

(continued) 1 09.01.00 S000069BNA

| | | | |
|--------------------------------|------|------|-------|
| PCB 1232 | ND | 34. | mg/kg |
| PCB 1242 | ND | 34. | mg/kg |
| PCB 1248 | ND | 34. | mg/kg |
| PCB 1254 | ND | 34. | mg/kg |
| PCB 1260 | ND | 34. | mg/kg |
| Bénzoic Acid | ND | 2.2 | mg/kg |
| Benzyl Alcohol | ND | 0.55 | mg/kg |
| 4-Chloro-3-methylphenol | ND | 0.55 | mg/kg |
| 2-Chlorophenol | ND | 0.55 | mg/kg |
| 2,4-Dichlorophenol | ND | 0.55 | mg/kg |
| 2,4-Dimethylphenol | ND | 0.55 | mg/kg |
| 2,4-Dinitrophenol | ND | 1.2 | mg/kg |
| 2-Methyl-4,6-dinitrophenol | ND | 1.2 | mg/kg |
| 2-Methylphenol (o-Cresol) | ND | 1.2 | mg/kg |
| 2-Nitrophenol | ND | 0.55 | mg/kg |
| 4-Nitrophenol | ND | 1.2 | mg/kg |
| Phenol | 18. | 0.55 | mg/kg |
| Pentachlorophenol | ND | 0.55 | mg/kg |
| 2,4,5-Trichlorophenol | ND | 0.55 | mg/kg |
| 2,4,6-Trichlorophenol | ND | 0.55 | mg/kg |
| Surrogate Nitrobenzene-d5 | 110. | | |
| Surrogate 2-Fluorobiphenyl | 103. | | |
| Surrogate Terphenyl-d14 | 223. | | |
| Surrogate 2-Fluorophenol | 93. | | |
| Surrogate Phenol-d6 | 88. | | |
| Surrogate 2,4,6-Tribromophenol | 78. | | |
| 4-Methylphenol/3-Methylphenol | 25. | 2.4 | mg/Kg |

LAB NUMBER: A080511-1 (continued)

SAMPLE ID: L8026-SL

SAMPLED: 15 AUG 00

METHOD: EPA 8021

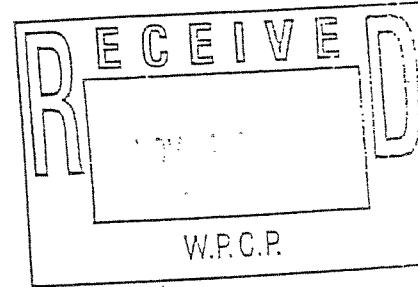
AROMATIC & HALOGENATED COMPOUNDS

1 08.29.00 V000102G6A 1.2

| | | | |
|-------------------------------|----|--------|-------|
| Benzene | ND | 0.0050 | mg/kg |
| Bromodichloromethane | ND | 0.006 | mg/kg |
| Bromoform | ND | 0.006 | mg/kg |
| Bromomethane (Methyl Bromide) | ND | 0.006 | mg/kg |

1) Sample Preparation on 08-28-00 using EPA 5030

2) Results expressed as wet weight.





ENVIRONMENTAL ANALYSES

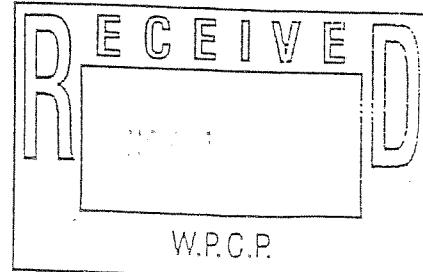
ORGANIC ANALYTICAL RESULTS

LAB ORDER No.:

A080511

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| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | OC BATCH | NOTES |
|---|--------|--------|-------|------|----------|----------|-------|
| LAB NUMBER: A080511-1 (continued) | | | | | | | |
| SAMPLE ID: L8026-SL | | | | | | | |
| SAMPLED: 15 AUG 00 | | | | | | | |
| METHOD: EPA 8021 | | | | | | | |
| AROMATIC & HALOGENATED COMPOUNDS (continued) | | | | | | | |
| Carbon Tetrachloride | ND | 0.006 | mg/kg | | | | |
| Chlorobenzene | ND | 0.006 | mg/kg | | | | |
| Chloroethane | ND | 0.003 | mg/kg | | | | |
| Chloroform | ND | 0.006 | mg/kg | | | | |
| 2-Chloroethylvinyl ether | ND | 0.006 | mg/kg | | | | |
| Chloromethane (Methyl Chloride) | ND | 0.006 | mg/kg | | | | |
| Dibromochloromethane | ND | 0.04 | mg/kg | | | | |
| Dibromomethane | ND | 0.006 | mg/kg | | | | |
| 1,2-Dichlorobenzene | ND | 0.006 | mg/kg | | | | |
| 1,3-Dichlorobenzene | ND | 0.006 | mg/kg | | | | |
| 1,4-Dichlorobenzene | ND | 0.006 | mg/kg | | | | |
| Dichlorodifluoromethane (F-12) | ND | 0.006 | mg/kg | | | | |
| 1,1-Dichloroethane | ND | 0.006 | mg/kg | | | | |
| 1,2-Dichloroethane (EDC) | ND | 0.006 | mg/kg | | | | |
| 1,1,-Dichloroethene | ND | 0.006 | mg/kg | | | | |
| cis-1,2-Dichloroethene | ND | 0.04 | mg/kg | | | | |
| trans-1,2-Dichloroethene | ND | 0.006 | mg/kg | | | | |
| 1,2-Dichloropropane | ND | 0.006 | mg/kg | | | | |
| trans-1,3-Dichloropropene | ND | 0.006 | mg/kg | | | | |
| Ethylbenzene | ND | 0.04 | mg/kg | | | | |
| Methylene Chloride | ND | 0.006 | mg/kg | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.2 | mg/kg | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.006 | mg/kg | | | | |
| Tetrachloroethene (PCE) | ND | 0.006 | mg/kg | | | | |
| Toluene | ND | 0.0050 | mg/kg | | | | |
| 1,1,1-Trichloroethane (TCA) | ND | 0.006 | mg/kg | | | | |
| 1,1,2-Trichloroethane | ND | 0.006 | mg/kg | | | | |
| Trichloroethene (TCE) | ND | 0.006 | mg/kg | | | | |
| Trichlorofluoromethane (F-11) | ND | 0.006 | mg/kg | | | | |
| Vinyl Chloride | ND | 0.003 | mg/kg | | | | |
| Xylenes (Total) | ND | 0.0050 | mg/kg | | | | |
| Surrogate 3-Bromochlorobenzene [ELCD] | 125. | | | | | | |
| Surrogate 3-Bromochlorobenzene [PID] | 28. | | | | | | |
| Surrogate 4-Bromofluorobenzene [ELCD] | 107. | | | | | | |
| Surrogate 4-Bromofluorobenzene [PID] | 34. | | | | | | |



Caltest
ANALYTICAL LABORATORY
ENVIRONMENTAL ANALYSES

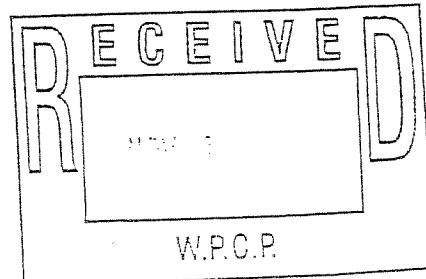
ORGANIC ANALYTICAL RESULTS

LAB ORDER No.:

A080511

Page 7 of 8

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | QC BATCH | NOTES |
|------------------------------------|--------|-------|-------|------|----------|----------|------------|
| LAB NUMBER: A080511-1 (continued) | | | | | | | |
| SAMPLE ID: L8026-SL | | | | | | | |
| SAMPLED: 15 AUG 00 | | | | | | | |
| METHOD: EPA 8260B | | | | | | | |
| VOLATILE ORGANIC COMPOUNDS | | | | | | | |
| Benzene | ND | 0.005 | mg/kg | | 1 | 08.29.00 | V000003MSB |
| Bromobenzene | ND | 0.005 | mg/kg | | | | 1,2 |
| Bromoform | ND | 0.005 | mg/kg | | | | |
| Bromochloromethane | ND | 0.005 | mg/kg | | | | |
| Bromodichloromethane | ND | 0.005 | mg/kg | | | | |
| Bromomethane (Methyl Bromide) | ND | 0.02 | mg/kg | | | | |
| n-Butylbenzene | ND | 0.005 | mg/kg | | | | |
| sec-Butylbenzene | ND | 0.005 | mg/kg | | | | |
| tert-Butylbenzene | ND | 0.005 | mg/kg | | | | |
| Carbon Tetrachloride | ND | 0.005 | mg/kg | | | | |
| Chlorobenzene | ND | 0.005 | mg/kg | | | | |
| Chloroethane (Ethyl Chloride) | ND | 0.02 | mg/kg | | | | |
| Chloroform | ND | 0.005 | mg/kg | | | | |
| Chloromethane (Methyl Chloride) | ND | 0.02 | mg/kg | | | | |
| 2-Chlorotoluene | ND | 0.005 | mg/kg | | | | |
| 4-Chlorotoluene | ND | 0.005 | mg/kg | | | | |
| Dibromochloromethane | ND | 0.005 | mg/kg | | | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 0.005 | mg/kg | | | | |
| 1,2-Dibromoethane (EDB) | ND | 0.005 | mg/kg | | | | |
| Dibromomethane | ND | 0.005 | mg/kg | | | | |
| 1,2-Dichlorobenzene | ND | 0.005 | mg/kg | | | | |
| 1,3-Dichlorobenzene | ND | 0.005 | mg/kg | | | | |
| 1,4-Dichlorobenzene | ND | 0.005 | mg/kg | | | | |
| Dichlorodifluoromethane (F-12) | ND | 0.01 | mg/kg | | | | |
| 1,1-Dichloroethane | ND | 0.005 | mg/kg | | | | |
| 1,2-Dichloroethane (EDC) | ND | 0.005 | mg/kg | | | | |
| 1,1-Dichloroethene | ND | 0.005 | mg/kg | | | | |
| cis-1,2-Dichloroethene | ND | 0.005 | mg/kg | | | | |
| trans-1,2-Dichloroethene | ND | 0.005 | mg/kg | | | | |
| 1,2-Dichloropropane | ND | 0.005 | mg/kg | | | | |
| 1,3-Dichloropropane | ND | 0.005 | mg/kg | | | | |
| 2,2-Dichloropropane | ND | 0.005 | mg/kg | | | | |
| 1,1-Dichloropropene | ND | 0.005 | mg/kg | | | | |
| Dichlorotrifluoroethane (F-123) | ND | 0.005 | mg/kg | | | | |
| Ethylbenzene | ND | 0.005 | mg/kg | | | | |
| Hexachlorobutadiene | ND | 0.005 | mg/kg | | | | |
| Isopropylbenzene | ND | 0.005 | mg/kg | | | | |
| p-Isopropyltoluene | 0.011 | 0.005 | mg/kg | | | | |
| Methylene Chloride | ND | 0.03 | mg/kg | | | | |
| Methyl tert-Butyl Ether (MTBE) | ND | 0.005 | mg/kg | | | | |



- 1) Sample Preparation on 08-29-00 using EPA 5030
- 2) Results expressed as wet weight.



ENVIRONMENTAL ANALYSES

ORGANIC ANALYTICAL RESULTS

LAB ORDER No.:

A080511

Page 8 of 8

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | OC BATCH | NOTES |
|---------|--------|------|-------|------|----------|----------|-------|
|---------|--------|------|-------|------|----------|----------|-------|

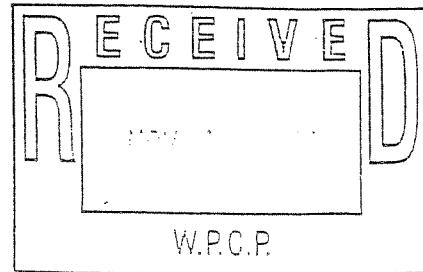
LAB NUMBER: A080511-1 (continued)
SAMPLE ID: L8026-SL
SAMPLED: 15 AUG 00
METHOD: EPA 8260B

VOLATILE ORGANIC COMPOUNDS

1 08.29.00 V000003MSB

(continued)

| | | | |
|----------------------------------|-----|-------|-------|
| Naphthalene | ND | 0.005 | mg/kg |
| n-Propylbenzene | ND | 0.005 | mg/kg |
| Styrene | ND | 0.005 | mg/kg |
| 1,1,1,2-Tetrachloroethane | ND | 0.005 | mg/kg |
| 1,1,2,2-Tetrachloroethane | ND | 0.005 | mg/kg |
| Tetrachloroethene (PCE) | ND | 0.005 | mg/kg |
| Toluene | ND | 0.005 | mg/kg |
| 1,2,3-Trichlorobenzene | ND | 0.005 | mg/kg |
| 1,2,4-Trichlorobenzene | ND | 0.005 | mg/kg |
| 1,1,1-Trichloroethane (TCA) | ND | 0.005 | mg/kg |
| 1,1,2-Trichloroethane | ND | 0.005 | mg/kg |
| Trichloroethene (TCE) | ND | 0.005 | mg/kg |
| Trichlorofluoromethane (F-11) | ND | 0.005 | mg/kg |
| 1,2,3-Trichloropropane | ND | 0.005 | mg/kg |
| Trichlorotrifluoroethane (F-113) | ND | 0.01 | mg/kg |
| 1,2,4-Trimethylbenzene | ND | 0.005 | mg/kg |
| 1,3,5-Trimethylbenzene | ND | 0.005 | mg/kg |
| Vinyl Chloride | ND | 0.005 | mg/kg |
| Xylenes (Total) | ND | 0.005 | mg/kg |
| Surrogate Dibromofluoromethane | 37. | | g |
| Surrogate 1,2-DCA-d4 | 33. | | g |
| Surrogate Toluene-d8 | 41. | | g |
| Surrogate 4-BFB | 89. | | g |



Appendix A-4

Forth Quarter Analytical Results



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LAB ORDER No.:

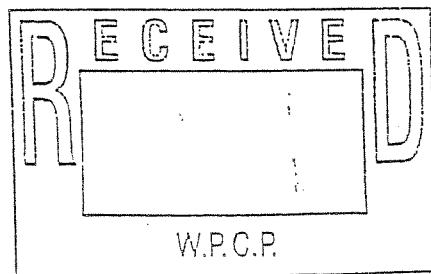
A110227

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INORGANIC ANALYTICAL RESULTS

| ANALYTE | RESULT | R.L. | UNITS | D.F. | METHOD | ANALYZED | QC BATCH | NOTES |
|------------------------|--------|------|-------|------|--------|----------|------------|------------|
| Antimony | ND | 2. | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Arsenic | 1.9 | 0.8 | mg/kg | 10 | 6010B | 11.20.00 | A000939ICP | 1.2 |
| Barium | 130. | 1. | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Beryllium | ND | 0.2 | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Cadmium | 0.6 | 0.2 | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Chromium | 13. | 1. | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Cobalt | 2.9 | 0.4 | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Copper | 160. | 1. | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Lead | 24. | 0.6 | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Mercury | 2.4 | 0.4 | mg/kg | 20 | 7471A | 11.14.00 | A000941MER | 2.3 |
| Molybdenum | 6. | 1. | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Nickel | 15. | 1. | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Selenium | 3. | 2. | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Silver | 7.6 | 0.6 | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Thallium | ND | 2. | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Vanadium | 8.1 | 0.4 | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Zinc | 840. | 4. | mg/kg | 10 | 6010B | 11.15.00 | A000939ICP | 1.2 |
| Cyanide, total | 1.6 | 0.4 | mg/kg | 5 | 9010A | 11.14.00 | I000093CYA | 2 |
| Solids, Total | 50.9 | 0.1 | g | 1 | | 160.3 | 11.13.00 | I000083SOL |
| Solids, Total Volatile | 60.5 | 0.1 | g | 1 | | 160.4 | 11.13.00 | |

- 1) Sample Preparation on 11-13-00 using 3050B
- 2) Results expressed as wet weight.
- 3) Sample Preparation on 11-13-00 using 7471A





ENVIRONMENTAL ANALYSES

LAB ORDER No.:

ORGANIC ANALYTICAL RESULTS

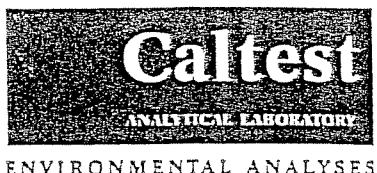
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| W.R. 3 of 7 | |

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | OC BATCH | NOTES |
|---------|--------|------|-------|------|----------|----------|-------|
|---------|--------|------|-------|------|----------|----------|-------|

LAB NUMBER: A110227-1
 SAMPLE ID: L8173-SL SLUDGE PILE
 SAMPLED: 06 NOV 00
 METHOD: EPA 8270

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | OC BATCH | NOTES |
|----------------------------------|--------|------|-------|------|------------|----------|-------|
| SEMIVOLATILE ORGANIC PLUS | | | | | S000091BNA | | 1-7 |
| TENTATIVELY IDENTIFIED COMPOUNDS | | | | | | | |
| Acenaphthene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Acenaphthylene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Aniline | ND | 2.1 | mg/kg | 1 | 11.29,00 | | |
| Anthracene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Benzidine | ND | 3.9 | mg/kg | 1 | 11.29,00 | | |
| Benzo(a)anthracene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Benzo(b)fluoranthene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Benzo(k)fluoranthene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Benzo(ghi)perylene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Benzo(a)pyrene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Benzylbutylphthalate | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| 4-Bromophenyl phenyl ether | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Carbazole | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| 4-Chloroaniline | 2.2 | 0.99 | mg/kg | 1 | 11.29,00 | | |
| bis(2-chloroethoxy)methane | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| bis(2-chloroethyl)ether | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| bis(2-chloroisopropyl)ether | ND | 2.1 | mg/kg | 1 | 11.29,00 | | |
| 2-Chloronaphthalene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| 4-Chlorophenyl phenyl ether | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Chrysene | 1.2 | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Dibenzo(a,h)anthracene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Dibenzofuran | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| 1,2-Dichlorobenzene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| 1,3-Dichlorobenzene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| 1,4-Dichlorobenzene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| 3,3-Dichlorobenzidine | ND | 5.1 | mg/kg | 1 | 11.29,00 | | |
| Diethyl phthalate | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Dimethyl phthalate | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| Di-n-butylphthalate | ND | 5.1 | mg/kg | 1 | 11.29,00 | | |
| 2,4-Dinitrotoluene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |
| 2,6-Dinitrotoluene | ND | 0.99 | mg/kg | 1 | 11.29,00 | | |

- 1) Sample Preparation on 11-17-00 using EPA 3550
- 2) Results expressed as wet weight.
- 3) Sample volumes altered in prep in an effort to reduce matrix effects resulting in (a) higher reporting limit(s).
- 4) Due to matrix interferences present in the sample, surrogate recoveries failed to meet the QA/QC acceptance criteria.
- 5) Refer to EPA SW-846 Third Edition for the specific protocol followed in the tentative identification of non-target compounds.
- 6) Due to low recoveries in the LCS 1,4-Dichlorobenzene and 2-Chlorophenol should
- 7) be considered estimates.



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| A110227 | |
| W.P. | Page 4 of 7 |

ORGANIC ANALYTICAL RESULTS

LAB ORDER No.

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | QC BATCH | NOTES |
|---------|--------|------|-------|------|----------|----------|-------|
|---------|--------|------|-------|------|----------|----------|-------|

LAB NUMBER: A110227-1 (continued)
 SAMPLE ID: L8173-SL SLUDGE PILE
 SAMPLED: 06 NOV 00
 METHOD: EPA 8270

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | QC BATCH | NOTES |
|--|--------|------|-------|------|----------|----------|------------|
| SEMIVOLATILE ORGANIC PLUS TENTATIVELY IDENTIFIED COMPOUNDS (continued) | | | | | | | S000091BNA |
| Di-n-octylphthalate | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 1,2-Diphenylhydrazine | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| bis(2-Ethylhexyl)phthalate | 27. | 8.5 | mg/kg | 5 | 12.01.00 | | |
| Fluoranthene | 1.2 | 0.99 | mg/kg | 1 | 11.29.00 | | |
| Fluorene | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| Hexachlorobenzene | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| Hexachlorobutadiene | ND | 5.1 | mg/kg | 1 | 11.29.00 | | |
| Hexachlorocyclopentadiene | ND | 5.1 | mg/kg | 1 | 11.29.00 | | |
| Hexachloroethane | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| Isophorone | ND | 5.1 | mg/kg | 1 | 11.29.00 | | |
| 2-Methylnaphthalene | ND | 2.1 | mg/kg | 1 | 11.29.00 | | |
| Naphthalene | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 2-Nitroaniline | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 3-Nitroaniline | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 4-Nitroaniline | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| Nitrobenzene | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| N-Nitrosodimethylamine | ND | 5.1 | mg/kg | 1 | 11.29.00 | | |
| N-Nitrosodiphenylamine | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| N-Nitrosodi-n-propylamine | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| Phenanthrene | 1.3 | 0.99 | mg/kg | 1 | 11.29.00 | | |
| Pyrene | 3.4 | 0.99 | mg/kg | 1 | 11.29.00 | | |
| Pyridine | ND | 2.1 | mg/kg | 1 | 11.29.00 | | |
| 1,2,4-Trichlorobenzene | ND | 2.1 | mg/kg | 1 | 11.29.00 | | |
| Benzoic Acid | ND | 3.9 | mg/kg | 1 | 11.29.00 | | |
| Benzyl Alcohol | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 4-Chloro-3-methylphenol | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 2-Chlorophenol | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 2,4-Dichlorophenol | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 2,4-Dimethylphenol | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 2,4-Dinitrophenol | ND | 2.1 | mg/kg | 1 | 11.29.00 | | |
| 2-Methyl-4,6-dinitrophenol | ND | 2.1 | mg/kg | 1 | 11.29.00 | | |
| 2-Methylphenol (o-Cresol) | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 3-/4-Methylphenol (m/p-Cresol) | ND | 0.33 | mg/kg | 1 | 11.29.00 | | |
| 2-Nitrophenol | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 4-Nitrophenol | ND | 2.1 | mg/kg | 1 | 11.29.00 | | |
| Phenol | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| Pentachlorophenol | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 2,4,5-Trichlorophenol | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |
| 2,4,6-Trichlorophenol | ND | 0.99 | mg/kg | 1 | 11.29.00 | | |

THE GULF



ENVIRONMENTAL ANALYSES

LAB ORDER No.:

A110227

W.P. Page 5 of

ORGANIC ANALYTICAL RESULTS

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | OC BATCH | NOTES |
|--|--------|------|-------|------|----------|----------|------------|
| LAB NUMBER: A110227-1 (continued) | | | | | | | |
| SAMPLE ID: L8173-SL SLUDGE PILE | | | | | | | |
| SAMPLED: 06 NOV 00 | | | | | | | |
| METHOD: EPA 8270 | | | | | | | |
| SEMIVOLATILE ORGANIC PLUS TENTATIVELY IDENTIFIED COMPOUNDS (continued) | | | | | | | S000091BNA |
| Surrogate Nitrobenzene-d5 | 75. | | | 1 | 11.29.00 | | |
| Surrogate 2-Fluorobiphenyl | 77. | | | 1 | 11.29.00 | | |
| Surrogate Terphenyl-d14 | 191. | | | 1 | 11.29.00 | | |
| Surrogate 2-Fluorophenol | 70. | | | 1 | 11.29.00 | | |
| Surrogate Phenol-d6 | 76. | | | 1 | 11.29.00 | | |
| Surrogate 2,4,6-Tribromophenol | 69. | | | 1 | 11.29.00 | | |
| Nonyl-Phenol(Tic) | 22. | 4. | mg/Kg | | | | |
| Hexadecanoic Acid(Tic) | 85. | 4. | mg/Kg | | | | |

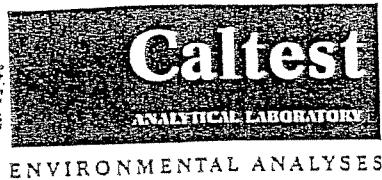
LAB NUMBER: A110227-1 (continued)
SAMPLE ID: L8173-SL SLUDGE PILE
SAMPLED: 06 NOV 00
METHOD: EPA 8260B

| | | | | | | | |
|--|----|-------|-------|---|----------|------------|-----|
| VOLATILE ORGANIC & TENTATIVELY IDENTIFIED COMPOUNDS | | | | 1 | 11.17.00 | V000038MSB | 1.2 |
| Benzene | ND | 0.005 | mg/kg | | | | |
| Bromobenzene | ND | 0.005 | mg/kg | | | | |
| Bromochloromethane | ND | 0.005 | mg/kg | | | | |
| Bromodichloromethane | ND | 0.005 | mg/kg | | | | |
| Bromoform | ND | 0.005 | mg/kg | | | | |
| Bromomethane (Methyl Bromide) | ND | 0.02 | mg/kg | | | | |
| n-Butylbenzene | ND | 0.005 | mg/kg | | | | |
| sec-Butylbenzene | ND | 0.005 | mg/kg | | | | |
| tert-Butylbenzene | ND | 0.005 | mg/kg | | | | |
| Carbon Tetrachloride | ND | 0.005 | mg/kg | | | | |
| Chlorobenzene | ND | 0.005 | mg/kg | | | | |
| Chloroethane (Ethyl Chloride) | ND | 0.02 | mg/kg | | | | |
| Chloroform | ND | 0.005 | mg/kg | | | | |
| Chloromethane (Methyl Chloride) | ND | 0.02 | mg/kg | | | | |
| 2-Chlorotoluene | ND | 0.005 | mg/kg | | | | |
| 4-Chlorotoluene | ND | 0.005 | mg/kg | | | | |
| Dibromochloromethane | ND | 0.005 | mg/kg | | | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 0.005 | mg/kg | | | | |
| 1,2-Dibromoethane (EDB) | ND | 0.005 | mg/kg | | | | |
| Dibromomethane | ND | 0.005 | mg/kg | | | | |
| 1,2-Dichlorobenzene | ND | 0.005 | mg/kg | | | | |

1) Sample Preparation on 11-17-00 using EPA 5030

2) Results expressed as wet weight.

FILE COPY



| | |
|-----------------|-----------------|
| RECEIVED | |
| W.P.C.P Page | A110221 6 of |

ORGANIC ANALYTICAL RESULTS

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | OC BATCH | NOTES |
|---------|--------|------|-------|------|----------|----------|-------|
|---------|--------|------|-------|------|----------|----------|-------|

LAB NUMBER: A110227-1 (continued)

SAMPLE ID: L8173-SL SLUDGE PILE

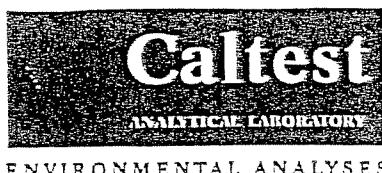
SAMPLED: 06 NOV 00

METHOD: EPA 8260B

VOLATILE ORGANIC & TENTATIVELY IDENTIFIED COMPOUNDS

(continued)

| | | | |
|----------------------------------|-----|-------|-------|
| 1,3-Dichlorobenzene | ND | 0.005 | mg/kg |
| 1,4-Dichlorobenzene | ND | 0.005 | mg/kg |
| Dichlorodifluoromethane (F-12) | ND | 0.01 | mg/kg |
| 1,1-Dichloroethane | ND | 0.005 | mg/kg |
| 1,2-Dichloroethane (EDC) | ND | 0.005 | mg/kg |
| 1,1-Dichloroethene | ND | 0.005 | mg/kg |
| cis-1,2-Dichloroethene | ND | 0.005 | mg/kg |
| trans-1,2-Dichloroethene | ND | 0.005 | mg/kg |
| 1,2-Dichloropropane | ND | 0.005 | mg/kg |
| 1,3-Dichloropropane | ND | 0.005 | mg/kg |
| 2,2-Dichloropropane | ND | 0.005 | mg/kg |
| 1,1-Dichloropropene | ND | 0.005 | mg/kg |
| Dichlorotrifluoroethane (F-123) | ND | 0.005 | mg/kg |
| Ethylbenzene | ND | 0.005 | mg/kg |
| Hexachlorobutadiene | ND | 0.005 | mg/kg |
| Isopropylbenzene | ND | 0.005 | mg/kg |
| p-Isopropyltoluene | ND | 0.005 | mg/kg |
| Methylene Chloride | ND | 0.03 | mg/kg |
| Methyl tert-Butyl Ether (MTBE) | ND | 0.005 | mg/kg |
| Naphthalene | ND | 0.005 | mg/kg |
| n-Propylbenzene | ND | 0.005 | mg/kg |
| Styrene | ND | 0.005 | mg/kg |
| 1,1,1,2-Tetrachloroethane | ND | 0.005 | mg/kg |
| 1,1,2,2-Tetrachloroethane | ND | 0.005 | mg/kg |
| Tetrachloroethene (PCE) | ND | 0.005 | mg/kg |
| Toluene | ND | 0.005 | mg/kg |
| 1,2,3-Trichlorobenzene | ND | 0.005 | mg/kg |
| 1,2,4-Trichlorobenzene | ND | 0.005 | mg/kg |
| 1,1,1-Trichloroethane (TCA) | ND | 0.005 | mg/kg |
| 1,1,2-Trichloroethane | ND | 0.005 | mg/kg |
| Trichloroethene (TCE) | ND | 0.005 | mg/kg |
| Trichlorofluoromethane (F-11) | ND | 0.005 | mg/kg |
| 1,2,3-Trichloropropane | ND | 0.005 | mg/kg |
| Trichlorotrifluoroethane (F-113) | ND | 0.01 | mg/kg |
| 1,2,4-Trimethylbenzene | ND | 0.005 | mg/kg |
| 1,3,5-Trimethylbenzene | ND | 0.005 | mg/kg |
| Vinyl Chloride | ND | 0.005 | mg/kg |
| Xylenes (Total) | 72. | 0.005 | mg/kg |
| Surrogate Dibromofluoromethane | 78. | as | |
| Surrogate 1,2-DCA-d4 | | as | |



11/14/2001

ORGANIC ANALYTICAL RESULTS

LAB ORDER No.:

A110227

Page 7 of 7

| ANALYTE | RESULT | R.L. | UNITS | D.F. | ANALYZED | OC BATCH | NOTES |
|---------|--------|------|-------|------|----------|----------|-------|
|---------|--------|------|-------|------|----------|----------|-------|

LAB NUMBER: A110227-1 (continued)

SAMPLE ID: L8173-SL SLUDGE PILE

SAMPLED: 06 NOV 00

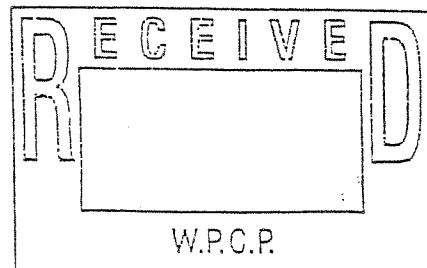
METHOD: EPA 8260B

VOLATILE ORGANIC & TENTATIVELY
IDENTIFIED COMPOUNDS

(continued)

| | | | | | | |
|-------------------------------|------|------|-------|--|--|--|
| Surrogate Toluene-d8 | 150. | | g | | | |
| Surrogate 4-BFB | 107. | | g | | | |
| Dimethyl Sulfide | 0.27 | 0.02 | mg/kg | | | |
| 1-Pentene, 2,4,4-Trimethyl- | 0.06 | 0.02 | mg/kg | | | |
| Disulfide, Dimethyl | 0.29 | 0.02 | mg/kg | | | |
| 3,5-Dimethyl-3-Heptene | 0.07 | 0.02 | mg/kg | | | |
| Cyclohexane, 1,2,3-Trimethyl- | 0.07 | 0.02 | mg/kg | | | |

1 11.17.00 V000038MSB



PROPOSER RESPONSE PAGES**FOR****Biosolids Loading, Transportation and Disposal or Reuse**

Honorable City Council
 City of Sunnyvale
 Sunnyvale, California

The undersigned proposer hereby offers to complete the specified services for the following price(s) in strict compliance with the specifications, terms and conditions set forth in this Request for Proposals.

I. UNIT PRICE FOR BIOSOLIDS REMOVED FROM PAVED DRYING AREA

| <u>Description</u> | <u>Unit Price, \$/Ton</u> | <u>Unit Price Written in Words</u> |
|--|---------------------------|--|
| LOADING AND TRANSPORATION: | | |
| A. Unit price per ton | \$17.67 | Seventeen dollars and 67/1 |
| B. State and local taxes, if applicable | -0- | Zero |
| C. Subtotal (A+B) | \$17.67 | Seventeen dollars and 67/1 |
| UNLOADING, RESUE OR DISPOSAL: | | |
| D. Unit price per ton | \$16.00 | Sixteen dollars and 00/100 |
| E. State and local taxes, if applicable | -0- | Zero |
| F. Subtotal (D+E) | \$16.00 | Sixteen dollars and 00/100 |
| G. Total Unit Price (C+F) | \$33.67 | Thirty three dollars and 67/100----- 500 to 2,000 tons/year |
| Range of quantities for which Total Unit Price Applies, tons/year: | | |

II. UNIT PRICE FOR BIOSOLIDS REMOVED FROM STORAGE LAGOON

| <u>Description</u> | <u>Unit Price, \$/Ton</u> | <u>Unit Price Written in Words</u> |
|--|---------------------------|---|
| LOADING AND TRANSPORATION: | | |
| A. Unit price per ton | \$27.67 | Twenty seven dollars and 67/100----- |
| B. State and local taxes, if applicable | -0- | Zero |
| C. Subtotal (A+B) | \$27.67 | Twenty seven dollars and 67/100 ----- |
| UNLOADING, RESUE OR DISPOSAL: | | |
| D. Unit price per ton | \$16.00 | Sixteen dollars and 00/100 |
| E. State and local taxes, if applicable | -0- | Zero |
| F. Subtotal (D+E) | \$16.00 | Sixteen dollars and 00/100 |
| G. Total Unit Price (C+F) | \$43.67 | Forty three dollars and 67/100----- 0 to 500 tons/year |
| Range of quantities for which Total Unit Price Applies, tons/year: | | |

EXHIBIT C

November 15, 2002
Mr. David Gakle

4. What are the clarifications in contract provisions referred to in the proposal transmittal letter?

The clarifications referred to in the transmittal letter are as follows:

1. We have a \$250,000 self-insured retention for General Liability, \$500,000 deductible for Automobile Liability, a \$250,000 deductible for Worker's Compensation and \$10,000 self-insured retention for umbrella liability. Our insurance will give 10 days notice for non-payment of premium. However, we pay our premiums 1 year in advance each year. We are paid thru Nov 1, 2003. We realize that these deductibles are higher than stipulated in the rfp. However, we request relief from the deductible requirement in light of the fact that we are a publicly traded company listed on the NASDAQ exchange (SYGR) with revenues approaching \$300 million per year.
2. We would like clarification that in joint negligence situations, each party will be responsible for its own liability?
3. Our contractual liability coverage covers contractual liability as respects negligence and tort claims. Is this sufficient?
4. Will the city certify that the material is non-hazardous Class B biosolids that is suitable for land application or disposal as alternative daily cover, and is not in violation of any federal, state or local law?

If you have any questions or require further information, please call me at (650) 333-0729. We look forward to working with you in the future.

Very truly yours,

John Pugliaresi

John Pugliaresi

Cc: Dvoshia Roscoe
Dean DeCourcy
Michael Beairsto
Sue Gregory
Adele Cossette